



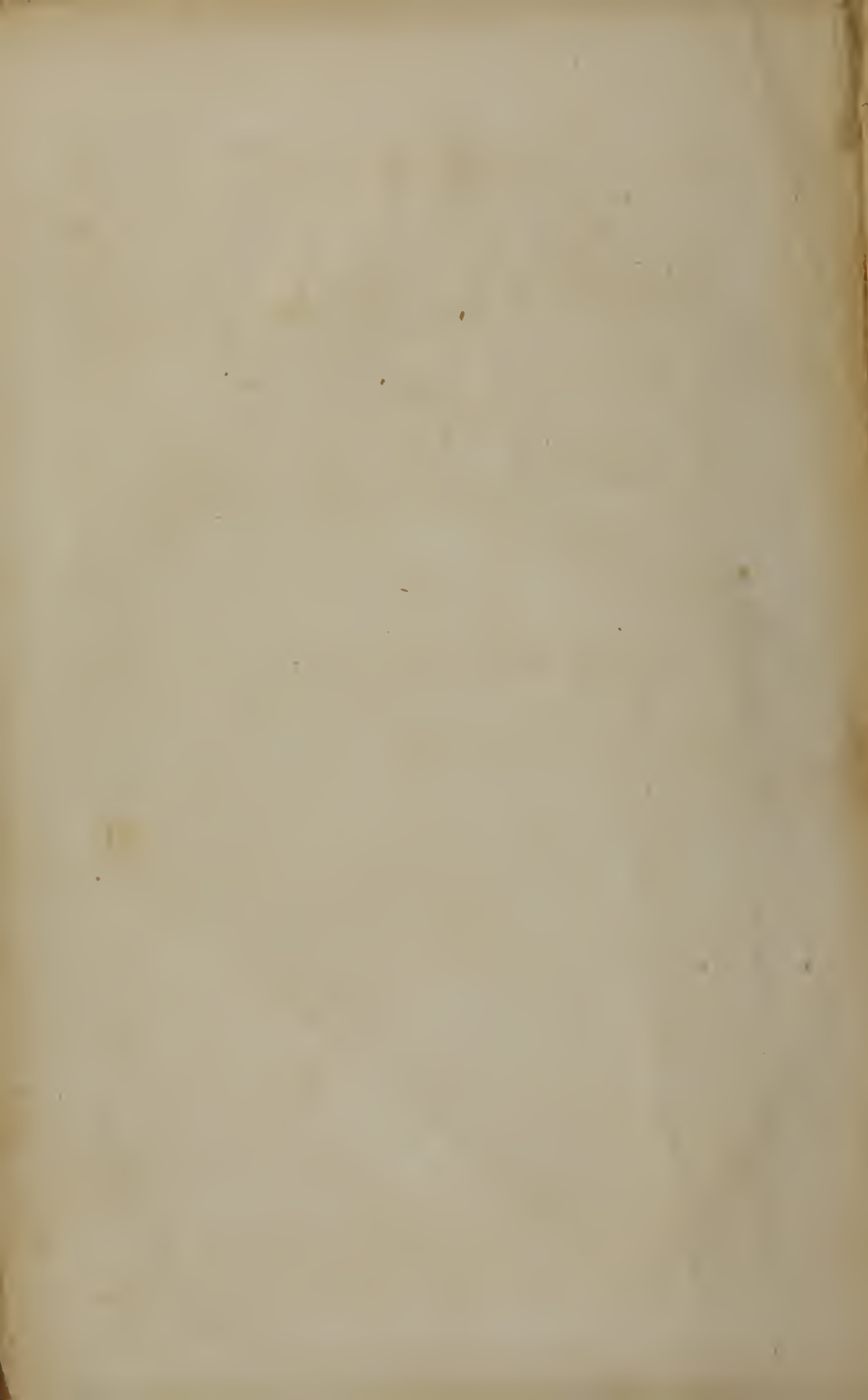
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NEW ENGLAND
POPULAR MEDICINE:

A WORK IN WHICH THE

PRINCIPLES AND PRACTICE OF MEDICINE

ARE FAMILIARLY EXPLAINED.

DESIGNED FOR THE USE OF FAMILIES

IN ALL PARTS OF THE UNITED STATES.

BY GEORGE CAPRON, M. D.,

AND

DAVID B. SLACK, M. D

FIFTH EDITION.

STEREOTYPED BY
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PREFACE TO THE STEREOTYPE EDITION.

THE ready sale which the first edition of this work has commanded ; the favor and approbation with which it has been received by the public, as well as by physicians of intelligence ; and the gratifying testimonials of regard expressed for it by the public journals to which it has been sent, together with further calls for the work, have induced the proprietors to issue a stereotype edition.

Nearly the whole of the first edition, of one thousand copies, was disposed of in the State of Rhode Island ; not more than a hundred copies went abroad. The work has been patronized by all classes of people,—farmers, mechanics, merchants, lawyers, doctors, ministers, and literary and scientific men. Women, in the treatment and management of their children and families in sickness, have expressed no less satisfaction in the possession of the book than men. A medical guide and adviser, full in its details and directions, has been long needed by people at large, and we confidently hope that the *New England Popular Medicine* may supply the deficiency. Our patrons may be fully assured that it is the cheapest medical work of its size, and for the amount of matter it contains, which has ever been sold in this country.

The cordial and flattering commendations bestowed upon the work, by numerous private individuals and members of the medical profession, persuade us that our design has been understood and approved.

People emigrating to the western country, and masters of vessels situated where it is difficult or impossible to secure the attendance of a physician, will find this book, we believe, a needful medical aid in times of sickness and accidents. We hope, also, it will be found a useful family instructor, as it involves and contains more or less of nearly all the sciences.

This edition, by employing a smaller-sized type, but one sufficiently legible, has been enlarged by the addition of between forty and fifty pages of new matter, embracing more articles of medicine, and further delineations of diseases. The whole has been revised, corrected, and improved.

Providence, July 19th, 1847.

P R E F A C E .

THE general diffusion of useful knowledge forms a new era in history. To know everything that can be known is the ruling spirit of the age. This is not only in the highest degree commendable; but must be supereminently happy in its results upon even the ordinary concerns of life. The science or art of medicine is a species of self-knowledge, which, of every other, people really stand in the most need of possessing. To be sick, and to know nothing of the nature of their disease, or of the means of curing it, places people in the most helpless condition.

In general, there is a profound ignorance of the human system, and of the healing art. This ignorance is as unfavorable to the progress of medicine as to the welfare of the public. It lays a foundation for every species of imposition, and leaves people without a guide in the selection of a suitable medical attendant when they are diseased. The *Domestic Medicine* of Buchan, printed seventy years ago, is too old a book to be much of a guide at the present day. The discoveries since made, the improvements introduced, and the alterations which have taken place in the modes of practice, have made medicine comparatively a new science.

In the following work, we hope we have fulfilled the promises contained in our prospectus. An endeavor has

been made to give a complete and comprehensive description of diseases, as well as full and definite directions for their treatment. In the choice of a proper arrangement for the work, many plans presented themselves, but the one selected, as the most convenient for a book of reference, is that of an alphabetical or dictionary form, placing the common name of the disease, medicine, or other subject, first, and the corresponding systematic or professional name after it.

The properties and effects of all the most important articles of medicines, both simple and compound, have been faithfully described, and the subjects of food, exercise, air, sleep, and regimen generally, received such consideration as is needful for the prevention and treatment of diseases. As much of the art of surgery as could be conveniently imparted to the popular mind, has been concisely treated of, and such parts of physiology and anatomy as are essential to the right understanding of the other parts of the work, briefly explained. Systematic names, and technical and professional terms, have been studiously avoided; the signs of disease described, as far as we were able, in the plainest and most intelligible language; and the work in every part adapted to the comprehension of the common reader.

Providence, March 30th, 1846.

NEW ENGLAND

POPULAR MEDICINE.

A B S.

ABDOMEN—The Belly.—The cavity of the abdomen or belly contains the stomach, the bowels, the liver, the kidneys, the spleen, the pancreas, the bladder, the omentum or apron, the mesentery, the membrane to which the bowels and other organs are attached, the descending aorta, and, in females, the uterus. It is the largest cavity in the body, and the various organs which it contains are called the abdominal viscera. The abdomen is separated from the chest or thorax by a partition called the diaphragm or midriff.

ABORTION.—See *Miscarriage*.

ABSCESS.—A collection of matter or pus in any part of the body is called an abscess. There is almost an endless variety of abscesses. Every tumor which ends in suppuration is properly an abscess, but the word commonly denotes a large cavity containing matter. A common boil, carbuncle, or felon, which has matured or come to a head, may be considered an abscess.

The most remarkable feature in abscesses is the great amount of matter which they sometimes contain. They have been known to discharge two or three quarts at a time. An abscess formed by an inflammation of the female breast not unfrequently discharges a pint of pus, and, sometimes, a quart. It is the product of inflammation. In sound, healthy people, an abscess will be circumscribed, or rather the pus will be contained in a round or globular cavity; but in feeble, scrofulous people, the matter will spread in any direction where it can find an inlet. In most abscesses, there is more or less swelling above the surface of the flesh, but some are almost flat, and others are situated in the chest, abdomen, and deep-seated parts where no external tumor is visible.

When an abscess begins to form after an acute inflammation, the event is usually denoted by chills, cessation of the pain, flushes of heat, and abatement of the fever. If the abscess is upon the surface of the body, there will be usually a white spot in the inflamed

part, more prominent than the rest of the tumor; softer; and disposed to fluctuate when pressed with the fingers.

One of the happiest laws which control the human constitution, is the almost uniform disposition of abscesses to seek the surface of the body for an outlet of the matter. Be the abscess situated where it may, the matter which it contains commonly eats its way to the surface of the body, where it may be innocently discharged. If this disposition of abscesses were reversed, or the matter equally disposed to run in all directions, life would be a thousand times more uncertain than it is. In some instances, abscesses form in a few days, and in others, they will be several years in forming. In acute inflammations the matter collects very quickly, but in chronic tumors the work of suppuration is slow.

Remedies. — The proper treatment of abscesses consists in the application of warm poultices and fomentations, in order to hasten the formation of matter, and to soften the superincumbent skin and flesh. The best poultices are made of white bread, rye meal, or flax-seed meal. The best washes or fomentations are warm water, poppy tea, milk and water, lettuce tea, and a liquor made of the wild indigo root, boiled.

In general, as soon as matter can be detected in any tumor, it is the safest practice to open it with a lancet. Abscesses are sometimes opened by the introduction of a seton, or by the application of caustic. In feeble constitutions, where the abscesses are large, it is sometimes necessary to strengthen the system with quinine, preparations of iron, and the mineral acids, before it will be safe to discharge the matter by making an opening. After the matter or pus is discharged from abscesses, they should still be covered with a poultice as long as there are any signs of active inflammation, or redness, pain, and soreness. The cavity should be kept clean, and the diet should be more plentiful and nutritious than during the process of inflammation. After the inflammation has subsided, the abscess may be covered with simple cerate, or a lead plaster.

The cavities of abscesses are sometimes stimulated with washes made of sugar of lead, white vitriol, blue vitriol, white oak bark, and a solution of nitrate of silver, or with the powder of calomel, red precipitate, alum, or borax. See *Lumbar Abscess*.

ABSORBENT. — This is the name of the smallest kind of vessels which has been discovered in the human body. The absorbents convey either a white or a transparent fluid. These vessels may be seen on the inner surface of the intestines of dogs after a full meal. They take up substances which are rubbed upon the surface of the body, and carry them into the blood. They also take up and remove the matter of abscesses, tumors, and indurations, and the fat or flesh of the body. When a person grows lean, it is effected by the agency of these little vessels. The fat and the flesh are, by them, converted into a fluid, carried into the mass of blood, and circulated over the system. These vessels thus continue

to devour the substance of the body, when the function of digestion is suspended by disease, until no flesh is left upon the bones, and even the bones themselves are very much diminished. The absorbents which take up the food or chyle and carry it into the blood-vessels are called *Lacteals*, and those which convey a watery matter are called *Lymphatics*.

The word absorbent is sometimes used in a very different sense in medicine. Magnesia and chalk are sometimes called absorbents, because they suck up and neutralize various fluids in the stomach and bowels, such as acids, water, and acid liquors. Any medicine is termed an absorbent which takes up the fluids of the stomach and bowels, or the moisture upon other parts of the body.

ACCOUCHEMENT. — The French word for the act of delivery of a woman in childbed. It is now very often used in English to express the same event.

ACETATE OF LEAD. — See *Sugar of Lead*.

ACID. — Acid means sourness. The number of acids is very numerous. Some are obtained from vegetables, and others from minerals. The most important acids obtained from vegetables are vinegar, or acetous acid, citric acid obtained from lemons, tartaric, prussic, and oxalic acids. The most essential mineral acids are oil of vitriol, aqua fortis, and the marine acid, or spirit of sea salt. The acids in general are cooling, and much given in fevers. They increase the appetite, and condense the fibres of the flesh. The mineral acids diluted are very strengthening.

ACNE. — See *Blotched Face*.

ACONITE — Wolf's Bane. — This plant grows wild in Germany and Switzerland, but has been transported to this country and cultivated in gardens. The species used in medicine has long spikes of large blue flowers, and three capsules to a flower. The plant is full of leaves, which are the broadest at the top, and marked with a line running along them. The fresh leaves have but very little smell, but when chewed have an acrid taste, and produce sharp pain in the tongue, which swells and becomes numb. The root is the most active part of the plant. The wolf's bane, when taken in a large dose, produces sickness at the stomach, swimming of the head, delirium, faintness, cold sweats, convulsions, and death. Given in suitable doses, it excites a sweat, induces sleep, and increases the quantity of urine. The juice of the plant, taken upon the tongue, excites a sensation of heat in the lips, gums, palate and throat, and a general tremor and chilliness in the whole frame. In a large dose, it excites a violent vomiting and purging. The proper dose of the fresh extract is half a grain made into a small pill. The plant in every part is unfit for use after it is a year old. The aconite is given in rheumatism, palsy, glandular swellings, venereal nodes, spinal disease, fits, and various nervous affections. The inspissated juice or extract is the form in common use. A tincture may be made by digesting an ounce of the leaves in a gill and a half of new rum. A dose of the tincture is from five to ten drops, which may be gradually increased to forty drops in

the course of two or three weeks. This medicine requires much caution in its use.

ACTUAL CAUTERY.—This is a surgical operation performed with a red hot iron. In former ages, before the method of tying an artery with a thread was discovered, the actual cautery was the only way known of stopping obstinate bleedings. A small rod of iron was heated to redness and applied to the bleeding vessel. It contracts the bleeding vessel, and the blood ceases to flow. This method is in many instances successful. In cutting tumors and cancers from the tongue, mouth, and throat, it is practised at the present day. The actual cautery is much more in use among the French than among the English and the United Statesians. In many chronic inflammations and diseases, it is unquestionably a potent, though a painful, remedy. In destroying the nerves of the teeth, it often succeeds better than other means. It is sometimes a substitute for blisters. The moxa, which, as used among us, is a little roll of cotton wool set on fire and allowed to burn down to the flesh, is another method of applying the actual cautery. The idea of substituting a burn for another disease appears to have come from the Asiatic nations.

ACUPUNCTURE—From *acus*, a needle, and *pungo*, to prick. The operation of making small punctures in the body with a needle for the relief of pain and the cure of disease. This operation is much practised in Siam, Japan, and other oriental countries, for the cure of headaches, lethargies, convulsions, colics, &c. It has been extensively tried by some European physicians of eminence, several of whom are extravagant in their “expectations of what may be done by the thrust of a needle.” Acupuncture has been practised in this country to some extent, and in a number of cases which have fallen under our observation has been attended with marked success. The number of diseases in which it is said to have been successful is very considerable; but the only cases in which we can rationally expect any benefit to result from it are chronic rheumatism,—especially when seated in the fleshy parts,—neuralgic or nervous affections, such as sciatica, tic douloureux, nervous headache, local paralysis, and some tumors which contain fluids, as ganglion and hydrocele. By inserting needles into these tumors, a degree of inflammation is excited, the fluid is absorbed, and a cure sometimes follows. “Needles made for this purpose are from one to four or five inches long, with round or annular heads, to prevent them from slipping below the skin;” but ordinary sewing-needles may be used. From one to twenty may be inserted at a time, and allowed to remain from a few minutes to several hours, or even days. The distance to which they should penetrate must depend upon the nature and seat of the disease for which they are employed. Even deep-seated organs have been penetrated by some rash experimenters, but in the present state of our knowledge this practice should not be imitated. It is the opinion of some, that one needle, allowed to remain an hour or two, is more efficient than several when per-

mitted to remain but a few minutes. When we consider how popular this remedy is in some countries, and by what high authority it is advocated, we cannot avoid the inference, that it really has some claims as a remedial agent; and that it should therefore be subjected to a more extensive trial than it has yet had in New England.

ADHESIVE PLASTER.—This is more commonly called sticking-plaster. It is made by adding half a pound of yellow resin to three pounds of lead plaster. Having melted the lead plaster over a slow fire, add the resin in powder, and stir them together. This plaster is used where the flesh has been cut or torn, to bring the sides of the wound together, that it may heal without suppurating. It is a principle in surgery, that the closer the lips or sides of a cut or wound are brought together, the more quickly and safely it will heal. The sticking-plaster is an admirable invention for this purpose. In most cases, it saves the pain and disfiguration of taking stitches or sewing up cuts and wounds, as was formerly the practice. It gives, in many cases, a mechanical support to the flesh, and is of excellent use in bringing the sides of old ulcers together, whereby adhesions may take place. The plaster is spread upon narrow strips of new cotton cloth or wash-leather, and one end of the strip, after being a little warmed, is pressed upon one side of the cut, wound or sore, and then, having brought the divided skin and flesh together, the other end or part of the strip is pressed hard upon the other side. In this way, one, two or more strips are laid on, with a little space between them, to allow the matter, if any is formed, to escape.

ADULT AGE—Manhood or womanhood. The period between youth and old age. In medicine, a person is considered an adult who has arrived at maturity.

ÆTHIOPS MINERAL.—Æthiops mineral is composed of sulphur and quicksilver, ground together in a mortar. This medicine is much used in diseases of the skin, such as affect children in early infancy, and in glandular disorders, such as scrofula, and indurations of the glands. It is also given for worms. The dose for a child one or two years old is two grains. For an adult, eight to ten grains. It is the least likely to salivate of all the mercurial preparations. It is a black powder, and looks very much like charcoal, and is most frequently given mixed with syrup or molasses.

AFFECTION.—Affection, in medicine, means the same as the words disorder, disease, distemper, and malady.

AFFUSION.—The act of pouring water or other fluids upon the surface of the body. Cold and warm affusions are much used in the treatment of diseases. In typhus and scarlet fevers, the cold affusion is esteemed an invaluable remedy during the first stage of those diseases. Where it does not cure the disease, it makes the patient more comfortable and easy. The patient may be placed in a tub or other convenient situation, and cold water poured upon him. He should then be wiped dry and put into bed. The cold affusion

should always be employed in the hot stage of fever, when the excitement is highest, and never when there is any chilliness or depression of the strength. Cold bathing, in whatever way practised, will always be injurious when the system is not in a condition to react, that is, to become warmer and more vigorous in all its functions.

AFTERBIRTH — Placenta. — This is the substance which comes away from the mother after the birth of a child. It is an organized body, of a glandular appearance, circular form, and about six inches in diameter, and as thick as the palm of the hand. Its office is to secrete blood from the womb of the mother, and to convey it to the blood-vessels of the fœtus. It is filled with arteries and veins, and, in appearance, resembles the spleen. The navel-string of the child, which is, in general, about half a yard in length, and as large round as the little finger, proceeds from the afterbirth, and enters the belly of the child. The afterbirth has two sets of blood-vessels; one takes the blood from the mother, and the other conveys it to her, and returns it from the child. The navel-string, funis, or chord, as it is variously called, contains two arteries and one vein. The vein conveys the blood from the mother to the child, and the two arteries convey the blood from the child back to the mother. These arteries beat in consonance with the beating of the child's heart. The afterbirth, during the growth of the child in the womb, adheres intimately to its substance. But after the child is born, the afterbirth separates and comes off with the membranes which enclosed the child before birth. These membranes, three in number, often adhere together in such a manner that they appear to be only one. They are called the amnion, the chorion, and the decidua. The afterbirth is convex on the side which adheres to the womb, and concave on the other. It commonly adheres to the fundus of the womb, although it may, and often does, adhere to almost every other part. It usually comes away from the mother in the course of half an hour or an hour after the child is born. In some instances, it is expelled at the same time with the child, and the membranes which contain the child are unbroken. After the birth of the child, there is a short cessation of the pains, but they soon return and expel the afterbirth.

AFTER-PAINS. — In child-birth, there are three distinct spells of pain. The first comes on to expel the child, the second to expel the afterbirth, and the third to expel the clots of blood which accumulate in the womb after the expulsion of the afterbirth, and to contract the organ to its natural size. The after-pains begin after the expulsion of the afterbirth. In some cases these pains are very slight, especially with the first child. In other cases, they will be almost as hard as those which expel the child. They commonly cease after about twenty-four hours, but will sometimes continue for two or three days. If any part of the afterbirth has been left, the pains may continue until it is expelled. The after-pains are commonly harmless, but when they are severe, and pre-

vent sleep, it is usual to give twenty-five or thirty drops of laudanum or morphine, which will moderate them. A table-spoonful of paregoric, or a plentiful draught of hop or poppy tea, will answer the same purpose.

AGRIMONY. — This plant is a native of the United States. Its blossoms are yellow and appear in July. The leaves of this plant are said to be laxative and tonic. The tea made of the leaves and stalks is of a dark yellow color, and, mixed with whey, affords an agreeable drink. The Indians are said to have used a tea made of the roots in inflammatory fevers.

AGUE. — See *Fever and Ague*.

AIR. — Bad air is as detrimental to health as bad food or bad water. But people in general are much less concerned about the properties and constitution of the air which they breathe, than about almost anything else which affects their bodily welfare.

Pure air is composed of three ingredients, or three kinds of air combined together. These three kinds of air or gases are all invisible to the eye, but still are capable of being submitted to examination by a proper apparatus or instruments. Twenty-one parts by measure of the pure air consist of a gas called oxygen. It is this part of the air which supports life, and gives the florid, red color to the blood in passing through the lungs. The other parts of the air, instead of supporting life, destroy it; if people attempt to breathe them, they faint and die immediately. More than three quarters of the air, or about seventy-eight parts in a hundred, consist of a gas called nitrogen. The other gas, or third ingredient of common air, is carbonic acid, such as flies off from a tumbler of soda-water, or from a bottle of beer. There is but a small proportion of this latter gas in the common air,—not more than a thousandth part. This gas, when absorbed by water, forms an acid which has a smart, sourish taste, and may be taken into the stomach with impunity. A lighted lamp placed under a vessel of this gas immediately goes out, and an animal placed in the same situation immediately expires. It is heavier than the other two gases, and always sinks below them. It settles into old wells and unventilated cellars, and sometimes destroys the lives of those who descend into them.

If several lamps are kept burning in a small tight room, the vital part of the air, or oxygen, is soon burned out, and nothing remains but the nitrogen and the carbonic acid gas. The lights first begin to burn dimly, and then go out. If there should happen to be a person asleep in this room, he faints and soon expires. If the room is large and not very tight, the person only feels weak, faint, and dizzy, or sick at the stomach. If any one should attempt to live in such a room, his health would be gradually undermined, and sooner or later some incurable disease be induced.

The health of the body is affected by changes in the temperature, weight, moisture and electrical state of the air.

Many diseases of the body are produced by changes from heat to

cold, and from cold to heat. Almost all inflammatory diseases appear, in a greater or less degree, to be produced by changes in the temperature of the air. The only way to avoid the extremes of these changes, is to pay proper attention to our clothing, our dwellings, and the degree of heat and cold which we are capable of supporting with comfort. Living long in a very hot air drains the body of its moisture, and disposes it to fevers, diseases of the liver, and cholera morbus. Living long in an extremely cold air exhausts the heat, and weakens all the vital functions. It is the *sudden* changes which people are chiefly to guard against.

The air affects our health by changes in its weight. It is sometimes much heavier than at others. The difference in the pressure of the atmosphere upon the body of an ordinary-sized man at different times, is equal to a ton weight. When it is heavy, it renders the flesh and fluids of the body denser and firmer. When it is light, the flesh, the vessels, and the fluids expand, and the whole body is rendered tumid. In very windy weather, the air is always light, and people, at such seasons, feel remarkably uneasy. The nerves, in particular, are very much affected by the weight of the air. Hysterics, hypochondria, and all nervous affections, are very much aggravated by changes which are indicated by the barometer. The human body contains a large quantity of air incorporated in every tissue, and when the pressure of the external air is diminished, the air within expands, and forces asunder every fibre in the system. Disease, in some shape or other, is no doubt often produced by this cause alone.

For this evil there is no known remedy ; but a knowledge of the fact may help us to explain many symptoms which can be accounted for in no other way. It is probably owing to this cause that many sick people and invalids become bloated, and look much fuller of flesh than they really are.

The air is often filled with moisture and wet. Damp air is extremely inimical to health. People who live in cellars, and low, damp places, are invariably unhealthy. Inflammations, dysenteries, and putrid fevers, are almost sure to overtake the inhabitants of cellars, and damp, wet houses. The damp, wet air, not only operates upon the surface of the body, but being breathed into the lungs, is almost sure to excite inflammation. People should be prohibited by law from living in all places under ground, or in damp, wet cellars. In the choice of locations for dwelling-houses, dry situations should always be selected ; and when moist places are built upon, the houses should be raised very high from the ground, and the air allowed to circulate under them. A house built over a damp, wet cellar, where the air is entirely prevented from circulating, must always be an unsuitable dwelling. The air confined under houses is very damp, and loaded with noxious vapors.

There is a wide difference between the open air, and the still, stagnant air of dwelling-houses, hospitals, churches, and school-

houses. The confined, still air in the rooms of houses, besides being exhausted of a considerable portion of its vital part by being breathed over by the family, by burning lights, and other modes of consumption, possesses much less elasticity and purity than the open air; it becomes charged with the perspiration and all the other effluvia of the body.

People confined day and night to the house, become pale, faint, and debilitated. They lose their appetite, and their vigor both of body and mind. The sleep is unsound, and the functions of the body are performed with difficulty. The windows and doors of dwelling-houses, and of all public buildings where people congregate, should be often thrown open, and the air suffered to pass freely through them. The air is a great solvent of all impurities, and will cleanse the filthiest places. Beds and bed-clothes should be allowed to lie exposed to a current of air, every day, for some time, before they are made up. Sick rooms should always be well ventilated. The sick suffer more for the want of a change of air than from exposure to colds when the open air is admitted.

All sores heal better, and all diseases recover better, in a pure than an impure air. We subsist almost as much upon air as upon food, and the quality of the air we breathe is as important as the quality of the food we eat. The foundation of many diseases is laid by staying too much in the house, and breathing a dead, still, filthy air. All people should strive as much as possible to live in the open air. There is as much difference between the air of a common dwelling-house, church, or school-house, and the open air, as there is between the water of a dead, still pond, and that of a running brook or living spring. It is very fortunate that the rooms in our manufacturing establishments, generally, are very large and full of windows, which may admit an abundance of air as well as of light.

When people become better acquainted with the properties of the air, the function of respiration, and the part which the vital air or oxygen plays in the subsistence, the vigor, and the health of the body, they will be much more abroad in the open air, and take vastly more pains to supply their habitations and places of resort with an element so essential to life and to health. We have sufficiently explained the difference between the open air and the still air of houses.

There are three other kinds of air which possess qualities more or less distinct. These are the sea air, the land air, and the marsh or lake air. The sea air is allowed on all hands, and by universal observation, to be the most pure, healthy, and invigorating. The sea air is not only a promoter of good health, but of good spirits and a cheerful mind. This air is the freest of foreign gases and vapors, and of course contains the most of the vital air in the same bulk. All fevers are milder, and all sores, ulcers, and diseases heal quicker, at sea than upon the land, if the same kind of aliment is afforded. Islands, which are in the situation of ships

at sea, are proverbially more healthy than places upon the continent; and the sea-shore is, for the same reason, more healthy than inland towns.

The sea air has an instantaneous and a wonderful effect upon the digestive organs. It sharpens the appetite and quickens the conversion of food into blood. For dyspepsia, nervous diseases, liver complaints, sores, ulcers, abscesses, diarrhœa, dysentery, the bowel complaint of children, dropsy, and all chronic diseases, with the exception of consumption, the air of the sea-shore and the islands of our Union is much better than the inland air; and in the summer time, the sea-shore air of New England is better than that of the southern states, inasmuch as it is cooler.

The land air is charged with a variety of odors, gases and vapors, which arise from the earth in the decomposition of animal and vegetable substances. In some seasons, the decay of these substances is so rapid and extensive as to produce a malignant state of the air. Fevers are proverbially more prevalent in inland towns, and especially in places where vegetation is abundant and rapid in growth, than upon the sea-shore or islands.

But the sickliest places upon the land are in the neighborhood of marshes, ponds, lakes, and large rivers, which overflow extensive intervals or meadows. From such places there arises a miasm, or putrid air, which never fails to generate the fever and ague, bilious fever, and malignant dysenteries. In all such places, the houses should be set high, either upon piles, or upon the highest and driest soil. The night air should be studiously avoided; the body should be well defended from sudden chills; and the food should be abundant and wholesome.

Sandy, dry places, though not so fertile and prolific, are more healthy than moist, clayey, and alluvial soils.

But although the country is less pure than the sea air, it is vastly more healthy than the city air. Many more children are raised in the country than in the cities, in proportion to their numbers. The air of cities is not only more confined and still, but is mixed with a thousand noxious gases, odors, vapors, and smokes. The mere smoke of chimneys occupies no small space in the atmosphere of cities. The perspiration and effluvia which arise from such a dense population of men and animals must also largely contaminate the air. In addition to this, there is the decay and putrefaction of large stores of fish, meats and grains, and vast accumulations of filth and dirt in the streets and sewers. From all these sources, a steam of deadly gases constantly goes up into the air to be breathed by the inhabitants, and happy is it if the city is situated upon some high and dry land upon the sea-shore, where the air can be changed by daily breezes, and these deadly poisons fanned away upon the open sea, or dispersed among the clouds. Ventilation should be the study of those who live in cities; and every hour that can be spared from business should be spent in the country. The practice of doing business in the city and sleeping in the country, is the best which can be adopted, both for health

and enjoyment. But even in cities, if children are allowed to go abroad to romp and play in the open air, it is vastly better for them than to be shut up in the house away from the light and breezes, and deprived of exercise. Exercise, by quickening the circulation of the blood, makes up, in a measure, for the want of a pure air. People who live much in the open air, uniformly sleep better, have better appetites, more strength, fewer diseases, and enjoy longer lives, than those who are confined to their houses.

AIR SWELLINGS—Tympany.—Air swellings or bloatings are affections which were noticed much more by our ancestors than they are by us. When a cupping-glass is applied to any part of the skin, a swelling immediately arises under the glass. The air which is contained in the skin and muscles expands when the weight of the atmosphere is removed by the cupping-glass, and a bloating or air swelling immediately arises. What is called the bloating of the face, and of the abdomen, and other parts, is produced in a similar way, but with this difference,—a weakness or relaxed state of the fibres of the muscles and membranes allows the air which they contain to expand, without the removal of the weight of the external air. Some people, in the morning, will look quite full-faced and fleshy, who, a little while after, will appear thin and sunken.

But the disease which more particularly takes the name of tympany is a constant accumulation of air in the abdomen, which renders the belly full, hard, and elastic, like the head of a drum. When the belly is pressed upon with the fingers, there remains no impression or indentation, as in the case of a watery swelling. The air is sometimes in the cavity of the abdomen, without the intestines, and, at others, in the tube of the intestines themselves, or between the different layers of membranes which compose the coats of the intestines. Ordinarily, tympany is a dense accumulation of wind in the colon, a portion of the large intestine. It has sometimes been drawn off by inserting a long gum-elastic tube into the rectum. It will often be relieved by gentle cathartics, particularly the spirits of turpentine mixed with castor-oil. Relief may also be obtained by cathartic injections. The most proper remedies are those which strengthen the whole system, such as iron, the mineral acids, quinine and bitters in general. But exercise and temperance appear to us to be the fundamental conditions which promise a cure. When a dense accumulation of air takes place in the abdominal cavity without the intestines, relief is much harder to be obtained, though, even in such cases, we should not despair of a cure. Exercise carried to the degree of raising a gentle perspiration every day; a selection of the most digestible and nourishing articles of food; and a constantly open state of the bowels, will do much towards a cure.

It has been a question with many, whether air ever exists in a free state in the arteries and veins. It appears to us very probable

that it does, and that it sometimes produces an irregularity of the pulse. The blood contains air, as well as the muscles and solid parts of the body; and this air may be sometimes liberated in the blood-vessels, as well as in the skin, muscles, and the large cavities of the body. When the atmospheric air has been introduced into the arteries and veins, it has produced instant death; but such an effect may be produced by air suddenly introduced by art, and not by a liberation of the air which is an ordinary constituent of the blood itself. In the latter case, it only produces disease, whereas in the former, it produces death.

We conceive, also, that the lacteals and the lymphatics may secrete air; and that, in this way, air may be introduced into the blood-vessels and excreted into the different cavities of the body. It is of the utmost importance, therefore, to produce a healthy state of the digestive organs and a regular action of the bowels. Costiveness must certainly aggravate, if it does not produce, the disease.

ALBUMEN.—One example of this substance is the white of an egg. It is one of the immediate principles of animals and vegetables. It is contained in the watery part of the blood, in the juices of the joints, and in the chyle. It is one of the chief constituent principles of the flesh, and of all the solid parts of the body. Heat coagulates it and renders it solid. It is also rendered solid by agitating it with ten or twelve times its weight of alcohol.

ALCOHOL.—See *Spirits of Wine*.

ALDER — BLACK.—The bark and the berries are the parts of this shrub which are used as medicine. The berries are red and bitter. The bark is astringent as well as bitter. The black alder is very common in New England. It grows in swamps and marshy places. The berries may be infused in brandy and given in diarrhœa, or looseness of the bowels. The bark, made into a tea, is a great strengthener of the stomach and bowels. In diseases of the skin, it is said to be a potent medicine. A tea made of the bark may be used as a wash to sores and ulcers.

ALKALI.—Crude potash, soda, and the spirits of hartshorn are *alkalies*. If the lye procured from wood ashes be boiled down, it makes potash. Soda is obtained from the ashes of burnt sea-weed, and ammonia or hartshorn is obtained from the horns of the hart. The alkalies and acids, mixed together, form a great number of salts. Oil of vitriol mixed with soda makes Glauber's salts. The marine acid combined with soda makes our common table salt. The aqua fortis mixed or combined with potash makes saltpetre. The carbonic acid, such as flies off from a tumbler of soda in the form of a gas or air, mixed with ammonia, makes the salts of hartshorn. The alkalies are used in medicine to correct or neutralize sourness of the stomach. They are also stimulating.

ALMOND OIL—*Oleum Amygdali Communis.*—This oil is obtained from fresh sweet almonds, by boiling them and ex-

pressing them in a hempen bag. The oil is laxative, and soothing to inflamed parts. It is often given in the dose of a tea-spoonful to children in the croup, lung fever, influenza, and other affections of the throat and lungs. It promotes expectoration, and quiets a cough. It is often mixed with squills and balsam of tolu, and given as a loosener of a cough. It is much used in gonorrhœa.

ALOES. — The aloes which we use is the inspissated juice of a perennial plant which grows in the warm latitudes of each quarter of the globe. It is brittle, very bitter, and melts in a moderate heat. The best kind of aloes comes from the island of Socotora, on the eastern coast of Africa, and is wrapped in skins. It is in small pieces, of a reddish-brown color, and when reduced to powder, is of a bright golden yellow. It has an aromatic flavor, and an agreeable odor. The Barbadoes aloes is in large masses, of a lighter color, and has an odor much stronger. Aloes is a warm, stimulating purgative. It appears to operate almost entirely upon the lower portion of the bowels, where costiveness is the oftenest situated. In the piles and fistula, it is an unsuitable medicine, but in all affections of the stomach, liver, and womb, it is an invaluable purgative. In the common headache, three or four aloetic pills are almost sure of procuring relief. Aloes is one of the most potent remedies in female obstructions. We are very sure that the famous Anderson pills are nothing more than aloes. We have noticed that these pills melt in warm weather. This they would not do, if they were mixed with any other powder or substance, in any considerable quantity. The dose of aloes is any quantity between five and fifteen grains, for an adult. The dose for a child, from one to four grains. Four pills of the common size, made by warming the aloes by the fire, are an ordinary dose. One pill will operate upon many people; some require two, and others, three. In all cases of mere costiveness, aloes will be found a safe and serviceable purgative.

ALUM. — This substance, or salt, is composed of the acid called oil of vitriol, or sulphuric acid, and argil or pure clay, with a small portion of potash. It is found in a native state, or may be manufactured artificially. Alum comes to us in large masses; it has a sweetish, astringent taste, and is semi-transparent. It readily dissolves in cold water, and is soluble in twice its weight of hot water. It is one of the most potent astringents in the materials of medicine. Dissolved in water, it makes an excellent lotion for the skin, and a wash for weak, inflamed eyes.

The powder of alum is a speedy emetic in the dose of a table-spoonful, and is one of the best medicines which we have ever used in the croup. The dose for a child a year old is a tea-spoon heaping full of the powder. Given in a larger dose, it operates both as an emetic and a cathartic. It has a peculiar property of emulging the glands of the throat, and of making them pour forth a large quantity of watery mucus. In bleedings from the uterus, bowels, and nose, it is one of the very best styptics which we possess. The

best form of giving it internally is that of alum whey, —made by adding two drachms of the powder to a pint of hot milk. The dose of the whey is from half a gill to a gill. As an emetic, alum operates easily, safely, and thoroughly.

ALVINE CONCRETIONS—Intestinal Calculi.—Hard substances occasionally found in the intestines. These substances are of various sizes, from that of a pea to that of an orange, and of different degrees of hardness, sometimes approximating to the solidity of stone. They have in some instances been discharged spontaneously, or by the operation of medicines, when their existence was not suspected; in others, they have been discovered by an examination of the bowels, having the feel of a hard tumor; but in the larger proportion of cases, they have been taken from bodies examined after death, when there was no suspicion of their existence. These concretions usually form around a nucleus of some hard, indigestible substance, such as a small piece of bone, the husks of seeds, fruit, stones, &c., and consist for the most part of concrete bile, indurated, tenacious mucus, intermingled with earthy and other extraneous matters. In other cases, they are altogether of an earthy composition, consisting of magnesia or carbonate of lime, (chalk,) which had been taken to neutralize acidity in the stomach. There are rarely more than two, though twelve have been observed in the same individual. When existing in the stomach, which sometimes happens, their number may be more considerable than in the bowels; from ten to thirty have been met with in this organ. It has been observed of alvine concretions, that they derange the functions of the alimentary canal, create griping, obstinate and long continued colicky pains, and more or less obstruct the passage of the aliment through the intestines; and that they sometimes change their situation, pass down into the rectum or lower bowel, occasioning acute pain and weight in the lower part of the back and fundament, with a constant desire to go to stool, which the patient cannot gratify. When in this situation, they may be extracted by the introduction of the finger or some suitable instrument. When very large and impacted, they cannot be moved from their situation except by an incision into the bowel, an operation which is liable to be followed by serious consequences; neither is there any chance of dissolving them by any medicine given internally. Under these circumstances, the bowels are, finally, completely obstructed, inflammation supervenes, and the patient dies with symptoms like those of colic. When the nature of the case is suspected before these concretions have arrived at any considerable magnitude, they may be removed by copious draughts of flax-seed or slippery-elm tea, half-pint doses of sweet oil, and other mucilaginous and oily substances, combined with a course of cathartic medicines. Should they lodge in the lower bowel, they must be artificially extracted. A case is related, in which an immense accumulation of cherry-stones was found in the cæcum and a part of the colon, below which there was a stricture,

which had intercepted their transmission. During life the tumor caused by the accumulation gave to the hand a feeling of crepitation like air in the flesh, which was found to be caused by friction of cherry-stones upon each other. It was proved that the fruit must have been eaten a twelvemonth before the decease of the individual. This case suggests the propriety of briefly alluding to a very prevalent error in regard to swallowing cherry-stones. It is generally believed that cherries are less hurtful when the stones are swallowed than when they are rejected; but nothing can be further from the truth. These substances are as indigestible as pebble-stones, and must pass through the whole tract of intestines unaltered; in doing which, besides disturbing the stomach and bowels, producing diarrhœa, cholera morbus, or colic, they not unfrequently lodge, and lay the foundation of incurable disease. A case similar to the one quoted occurred in this city several years ago; but the stricture being situated lower down in the rectum, the patient was relieved; not, however, without great difficulty and suffering. The quantity of cherry-stones which had been pent up back of the stricture many months was not less than a gill. The subject of this case has died within the last year of the stricture, which was much aggravated, if not caused, by the cherry-stones. A well-known revolutionary captain, in this vicinity, lost his life some years since by swallowing a large number of cherry-stones, under the mistaken impression that they would prevent the cherries from injuring him. The stomach and bowels were disordered, with sickness, diarrhœa, griping pains, &c.; his appetite was depraved, digestion suspended, debility and emaciation induced, and he died three months from the time the cherries were eaten. The true cause of his indisposition was not suspected, until he vomited up from twenty to thirty cherry-stones five weeks after they were swallowed. Similar cases frequently occur, in which death is produced in a few days, especially in children, whose stomach and bowels are more irritable, and consequently more predisposed to disease, than those of adults.

It is hoped that the above briefly stated facts and observations will have the effect, in some measure, to do away with this unnatural, unphilosophical, and dangerous practice.

AMAUIROSIS. — A total loss of the sight without any visible alteration of the eye. It is a palsy of the optic nerve or retina, whereby the sight is destroyed without injury to the other parts of the eye. It is produced by severe pains in the head, nervous affections, and blows upon the head. This disease is at first indicated by the appearance of particles floating in the air before the eyes, which the person will attempt to brush away with the hand. See *Dimness of Sight*.

AMENORRHEA. — See *Green Sickness*.

AMMONIA. — This substance is a volatile alkali, pungent to the smell, and absorbed by water. It is a transparent, colorless, invisible gas. It is obtained from the salt called muriate of am-

monia, by adding lime, and applying heat to the mixture. These substances are mixed with water and distilled in a glass retort. The alkaline air combines with the watery vapor, and forms what is called the water of ammonia, hartshorn or smelling-drops. Ammonia, or the water of ammonia, combines with oils, and forms soaps and volatile liniments. It has a burning, caustic taste, like potash; and combined with the acids, forms a variety of salts, such as the salts of hartshorn, sal ammonia, and acetate of ammonia.

The water of ammonia applied to the skin raises a blister. It is a powerful stimulant and promoter of sweat. The dose for an adult is twenty drops, in a gill of water. The dose for a child between one and four years of age is three or four drops, well diluted with water. In fits, fainting, and headache, applied to the nostrils, the ammoniacal gas often produces relief. In combination with sweet oil, it forms the notable volatile liniment. Nothing neutralizes the sourness of the stomach more effectually than a few drops of the water of ammonia well diluted.

The spirit of ammonia is a different preparation, made by adding the spirits of wine to the other ingredients, and distilling the whole in a glass retort.

AMPUTATION. — Accident and disease sometimes render the sacrifice of a limb, the female breast, or some other part of the body, necessary to life or health; and the cutting off or removal of such part is called amputation. It is not always easy to decide upon the necessity or propriety of this operation, or the time when, or place where, it should be performed; but the operation itself, when determined upon, is one of the simplest and least dangerous that the surgeon is called upon to perform. It is not uncommon for people to put themselves to much trouble and unnecessary expense, in sending a great distance for a surgeon to amputate a limb in case of an accident, for instance, when, perhaps, the nearest physician at hand might do it equally as well, with no more pain to the patient, and a great saving of time, and prevent the danger sometimes attendant upon delay.

Cases requiring amputation are numerous, and various in their character; some of which are gangrene, white swelling, necrosis, caries, compound fractures and dislocations, gun-shot wounds, cancers and malignant tumors.

The instruments usually employed in the operation are a tourniquet, amputating knives, scalpel, saw, tenaculum, forceps, catlin, scissors and sponges; and for dressing the stump, adhesive plaster, linen compresses, lint and roller bandages.

Substitutes for several of these instruments may be found in almost any house or village in the country. The place of the tourniquet may be supplied by a strap with a buckle, or a handkerchief put around the limb, and a stick passed through it in such a manner that a twist may be taken upon it. A razor, with the handle made permanent, may be used for a knife, and a fine carpenter's saw answers a very good purpose for sawing the bone;

so that a physician who has a pocket-case containing a tenaculum, scalpel, and forceps, would be in a condition to perform the operation successfully.

The patient should be placed in a convenient and comfortable position, where there is a good light, and the tourniquet applied over the principal artery, and screwed up until no pulsation can be felt below it.

High up, near the arm-pit, is the place usually chosen for the application of the tourniquet when the arm is to be cut off, and near the body, on the thigh, when the leg is to be operated upon. There are several ways of making the first cut or incision, but what is called the circular incision is the one most frequently employed.

An assistant, grasping the limb with both hands above where the incision is to be made, should draw up the skin and cellular substance as far as possible, and hold them in that situation, while the operator, standing on the outside of the limb, and passing the knife under and up on the inside, commences the incision at such a point as to be able, with a single circular stroke, to divide them down to the red flesh or muscles. The assistant should continue to draw the integuments upwards, while the operator dissects them off from the muscles to such an extent as is necessary to have them completely cover the stump when the limb is severed. Before the assistant relaxes his hold upon the skin, the muscles should be divided close to the edge of it down to the bone, by one stroke of the knife, beginning, as before, on the upper and inner side of the limb, and continuing it round beneath and up on the outside, until it terminates where it commenced.

In order to be certain to have the end of the bone well covered, the muscles are now to be separated from it and drawn upwards, to a greater or less distance, according to the size of the limb, by means of a narrow strip of firm cloth, slit one half its length, called a retractor. The width of the retractor should be in proportion to the size of the limb, and being properly applied, it will also protect the flesh from being wounded in sawing the bone. After dividing the periosteum with a knife, and the limb being properly supported by an assistant, the bone is divided by a few, long, light, and steady strokes of the saw. The end of the bone should be smoothed if there be any roughness, the stump cleansed with warm water, and the arteries secured with small, strong ligatures, one end of which should be left long enough to hang out of the wound when dressed. The tourniquet should now be loosened, and if any vessels bleed, they must be tied, and, if necessary, it must be tightened again, to prevent an unnecessary loss of blood. Being assured that there is no further danger of bleeding, the flesh and skin are to be brought accurately together over the bone, and retained by strips of adhesive plaster.

A compress of lint and folded linen are to be applied over the wound, and the dressing finished by the application of a cross

bandage and roller. Except there should be secondary bleeding, the dressings will not require to be removed before the fourth or fifth day, after which, if there be much discharge of matter, they should be changed daily, until the ligatures come away and the wound is healed.

In amputations of the fingers and toes, the bones of the hands and feet, the wrist and lower part of the leg, where there is comparatively but little flesh and integument, great care and calculation are necessary, to preserve a suitable covering for the remaining portion of bone. The usefulness of the stump is a consideration of the first importance, and the best that circumstances will permit should be done, to prevent it from appearing unsightly and disgusting.

When the operation is performed on the arm below the elbow, and below the knee on the leg, where there are two bones, a narrow, two-edged knife, called a catlin, is used, to pass through and divide the flesh between them. It is seldom necessary to amputate at the joints, and should always be avoided when it can be done with safety. The operation should never be performed at the elbow or knee, and it is better to lose a few inches of the arm or leg than to operate at the wrist or ankle.

The pain of the operation is undoubtedly great, but not insupportable. The first incision gives very acute pain, and dividing the muscles, nerves, &c., gives a severe shock to the system; but the common opinion that sawing the bone is very painful is erroneous, as the bones in a healthy state are insensible; and except the saw heat, the only sensation is that of a disagreeable jarring.

During the cure of the wound, after amputation, the patient should be kept perfectly quiet, and due attention be paid to the general health. The diet should be light and nutritious; inflammation and fever be guarded against by keeping the bowels free, and other means usually recommended for that purpose. When the operation has been performed on account of any particular disease, the treatment must be regulated accordingly. As it is not in accordance with the design of this work to enter fully into all the operations in surgery, except those which may be performed without the aid of a physician, we shall conclude this brief article by referring those who may desire to be further informed upon this subject to some of the numerous works which are expressly devoted to it, among which may be mentioned Hooper's Surgical Dictionary.

ANASARCA — Dropsy of the skin and flesh. — See *Dropsy*.

ANASTOMOSIS. — Communication between two vessels, by means of joining their mouths.

ANCHYLOSIS. — This disease is a stiffness of the joints. It is produced by a permanent contraction of the muscles in consequence of rheumatism, white swellings, palsy, and mechanical injuries. Sometimes the ends of the bones grow together in consequence of an inflammation from fractures, bruises, and burns. Sprains and dislocations often produce stiff joints. Young people

will sometimes recover from this disease, but where it happens in middle-aged or old people, it rarely becomes better. We once saw a stiff knee produced by a violent rheumatic affection, but which, after a year or two, became as pliable as ever. It occurred in a young woman who was obliged to work hard, and who was consequently often thrown into a profuse perspiration, which operated favorably to the removal of the disease. While any inflammation exists in a joint, the greatest pains should be taken to reduce it. This should be done by steaming the joint, by poultices, by leeches, and by blisters. Warm vinegar and rum kept constantly applied, by means of flannel, to the part, is an excellent solvent of chronic inflammations of the joints. Sweet oil and the spirits of turpentine, opodeldoc and the volatile liniment, will all be found extremely useful in many instances. The use of mercurial ointment should not be omitted where other applications fail. But, above all, friction, or rubbing of the joint and adjacent muscles, should be practised every day for an hour or two at a time. No opportunity should be lost in trying to move the joint, and to exercise it in various ways. Motion has a peculiar power in calling the blood into a part, and in rendering it pliable. A plaster of shoemaker's wax, mixed with just enough of the powder of the Armenian bole to render it stiff, worn around the joint, has often removed the stiffness. The hot sulphur bath has sometimes proved a cure where other remedies have failed.

ANEURISM. — An aneurism is a pulsating tumor, situated in a section of an artery. The inner coat of the artery is ruptured, or gives way to the pressure of the blood, and a dilatation is the consequence. In some cases, all the coats of an artery are injured or weakened by disease or wounds, and an aneurism is the consequence.

In the commencement of an aneurism, there will be perceived an extraordinary beating or pulsating in a portion of some particular artery. At the throbbing point there will be found a tumor, which will entirely disappear when pressed by the hand, but which returns again when the pressure is removed. There is no change in the color of the skin over the tumor, nor any pain felt in the part. The only unnatural appearances are the swelling and the throbbing. Aneurismal tumors make their appearance in all parts of the body, but most commonly in the large arteries. In an aneurism of the aorta, the pulsation is felt through the belly. These tumors, which are filled with blood and liable to burst at any moment after they become large, take place in the carotid arteries and in the large arteries of the legs. The popliteal aneurism, situated in the knee joint, is one of the most common.

Some aneurisms are circumscribed and defined, while others are diffused and present a dilatation of a long portion of an artery. When an aneurism has once commenced, it continues to enlarge until it bursts, or attains a large size. Some of them present bags or sacs of blood as large as a two-quart bowl.

The part of the artery below the aneurism usually diminishes in size, and the circumjacent parts are emaciated. In proportion as the tumor enlarges, the pulsation becomes more faint and indistinct. The pressure of the tumor upon the surrounding parts produces indurations, ulcerations, and caries. The danger of aneurisms is their bursting and causing sudden death by bleeding. Before they burst, the part about to give way becomes more tense, elevated, thin, soft, and of a dark purple color. The spurious aneurism is owing to the rupture of an artery and the escape of blood into the surrounding texture.

The treatment of aneurism consists in compressing the artery above the tumor, and applying pressure to the tumor itself. An instrument called the tourniquet is applied to the artery above the tumor, which prevents the flow of the blood into the tumor, and gives it a chance to decrease. When aneurisms are situated internally, their progress is arrested by blood-letting, cathartics, and a spare diet.

Almost the only chance of a cure consists in taking up the artery and tying it with a ligature. The artery is cut down upon a little way above the aneurism, lifted up, and a string tied very tight around it. The blood is stopped from flowing into the sac which immediately begins to decrease in size, and the artery below the ligature becomes obliterated by absorption.

Aneurisms are sometimes produced by careless bleeding in the arm. The artery is punctured, and the blood flows into the surrounding texture; the arm becomes purple, and sometimes mortification ensues.

If an aneurismal tumor bursts suddenly, the thumb should be pressed upon the artery above hard enough to stop the flow of the blood. In this way the artery must be pressed, until better assistance can be procured. A tolerable tourniquet can be made by rolling up a piece of cloth, placing it upon the artery, and binding it tight with a bandage.

ANGELICA. — This plant is called the garden angelica. It is a large biennial, umbelliferous plant, and in Alpine countries grows upon the banks of rivers. It is called angelica from its supposed angelic virtues. There is a kind indigenous to this country, called masterwort. It grows spontaneously in all parts of the country, in meadows, and marshy woods. The flowers appear in June and July, and are of a greenish-white color. The juice of the fresh root is acrid and somewhat poisonous. The whole plant is medicinal, and the acridness of the root is dissipated by drying. The angelica is stimulant, aromatic, and strengthening.

The seeds are often given in the country in the cases of wind colics, and griping pains in the bowels and stomach. An infusion is made of the seeds, and from a table-spoonful to a tea-cupful given from time to time, as the case may require.

ANGINA MALIGNA. — See *Canker Rash*.

ANGINA PAROTIDEA. — See *Mumps*.

ANGINA PECTORIS. — This is a painful, and, sometimes, an agonizing affection of the heart. It is commonly felt as a pain in the breast, without referring it to any particular part. It is known to be an affection of the heart by dissection after death. Its attacks commence very suddenly. An acute pain is felt at the lower end of the breastbone, extending a little to the left side, precisely over the position of the heart in the chest; a loss of breath or a sense of suffocation, and great anxiety, follow the pain. The countenance becomes deadly pale; the pulse sinks; and the surface of the body is covered with a cold sweat. Such is the sinking of the vital powers, that life itself seems about to be suspended. In the commencement of the disease the fits of distress are relieved by lying down, and a little repose, or only by standing still; but at length they grow more severe, and can only be relieved by the most powerful anodynes. The affection is at first discovered by ascending a hill, or by suddenly running up stairs. Sudden emotions of the mind, and inordinate bursts of temper, induce it. Where the disorder becomes violent, the pain extends from the heart to the middle of the arm.

On dissection, the arteries which supply the heart itself with blood are usually found to be ossified; but a functional disease of the heart, lungs, and stomach, is each thought, by some, to produce it.

The spells of anxiety and distress will often last for half an hour at a time, accompanied with a violent palpitation of the heart. The paroxysms appear to be produced frequently by eating a full meal. A light vegetable diet is, therefore, of the first importance in preventing a recurrence of the affection.

A mixture of equal parts of laudanum and ether is found to relieve the affection the most effectually of anything. A teaspoonful of each may be taken at a time, in a little cold water. An issue made upon each thigh is said to have cured the disease. Blisters have been found serviceable if applied to the chest. The cultivation of a quiet, even temper of mind; the avoidance of all sudden and violent exertions of the strength; a vegetable diet; cold water for drink; early rising and moderate exercise, are the necessary conditions both of relief and of cure. Wind in the stomach and bowels frequently accompanies angina pectoris, and when this is the case, peppermint, camphor, paregoric, the essence of cinnamon or of anise-seed, should be given.

ANGINA TONSILLARIS—Inflammatory Sore Throat. — Inflammation of the tonsils. See *Sore Throat*.

ANGINA TRACHEALIS. — Inflammation of the windpipe. See *Croup*.

ANIMAL HEAT. — The temperature of inanimate bodies and of cold-blooded animals rises and falls with the temperature of the bodies which surround them. But the human body maintains a certain degree of heat in all situations compatible with life. If the external heat of the sun and atmosphere is greater than that of the body, the body still maintains its usual degree of heat, which

is about ninety-eight degrees by the thermometer ; or if the temperature of the sun and atmosphere is less than that of the body, instead of becoming as cold as the surrounding medium, like other bodies, the human system retains its accustomed warmth. It has a source of heat within itself. Where the source of heat is situated, and what the nature of the process is which generates it, have been subjects of inquiry for many ages. Amid the cold of winter and the heat of summer, we know that the human body is of the same temperature.

In the human body there is a constant evolution or disengagement of heat ; and it has been ascertained, with some degree of certainty, that the source of this heat is the mutual action between the elements of the food and the oxygen or vital part of the air conveyed by the circulation of the blood to every part of the body.

It is conformable to common observation, and has been confirmed by numberless experiments, that a solid body, in becoming fluid, must absorb heat to maintain it in a fluid state, and that a fluid body, in becoming solid, gives out heat or disengages it. We know that ice will not melt or become fluid unless a large quantity of heat is supplied. This heat is absorbed by the water, and retained by it until it is placed in a very cold situation or atmosphere, which absorbs again the heat from the water and converts it into ice. Water becomes ice, or a solid body, by giving up its heat to the surrounding air, and ice becomes water, or a fluid body, by absorbing heat from the surrounding air, or from some heated body.

Heat is also evolved or disengaged when vapor or gas is converted into a fluid. In a distillery, the steam passes through a cold leaden pipe, which absorbs the heat from the steam, and the steam is converted into water, or fluid ; in other words, the steam gives out its heat to the worm, or leaden pipe. In becoming a fluid, the steam parts with its heat, and this is the cause of its conversion into water. Water, in becoming steam, absorbs a great quantity of heat. A kettle of water must be kept at a boiling point a long time before the water will all be converted into steam. All the heat which is applied to the kettle goes into the steam, and is there retained until the steam is converted back into water. The heat becomes latent in the steam. The steam is no hotter than boiling water. When ice is melted, if no more heat is employed than barely to melt it, the water is of the same temperature, or degree of heat, by the thermometer, as the ice ; the heat which has been employed to melt the ice is all absorbed by the water, and retained in a latent state. If more heat is added to this water it will rise in temperature until it begins to boil, when it will rise no higher. In the expansion of water into steam there is always absorbed from the fire a certain amount of heat, which amount is evolved or given out in the condensation of the steam into water.

Every kind of gas, air, steam, or vapor, in becoming a fluid or a

solid body, follows this law—heat is evolved. And every solid or fluid body, in its conversion into a gas, air, or steam, absorbs heat, or requires heat to convert it into that state.

In the combustion or burning of a body, a certain amount of the oxygen of the air combines with the body burnt. In the burning of charcoal, one part of the charcoal combines with about two parts, or twice its weight, of oxygen, and forms carbonic acid gas. In the conversion of the oxygen gas into carbonic acid, the oxygen evolves or parts with a portion of its latent heat. The carbonic acid is a heavier gas, and requires a less heat than oxygen to maintain it in the gaseous state. Lavoisier burnt charcoal, or carbon, in a hollow globe of ice, and found that the burning of one pound of charcoal melted ninety-six pounds of ice, and consumed two pounds and a half of oxygen.

In the process of breathing there is a certain quantity of the oxygen of the air consumed, and about the same quantity, in volume, of carbonic acid formed or breathed out of the lungs. The conversion of this oxygen into carbonic acid gas in the lungs, has, ever since the time of Dr. Crawford, who invented the hypothesis, been supposed to be the principal source of the heat of the body. It is supposed that the venous blood contains carbon in a fluid state, and that this carbon combines with the oxygen of the inspired air, and forms the carbonic acid which is constantly expired. In the formation of the carbonic acid, heat is evolved upon the same principle as when carbon, or charcoal, is burned in the air, and distributed, by means of the circulation of the blood, to every part of the body.

Liebig has lately enlarged the dimensions of Crawford's hypothesis, and resolved the production of animal heat into the combustion of carbon and hydrogen in the body at large. The food furnishes the carbon and hydrogen, and the air the oxygen.

His theory is, that the animal heat is derived from the combination of oxygen with the carbon and hydrogen of the metamorphosed tissues, which proceed ultimately from the food.

The combination of oxygen with these two combustible bodies he assumes to be the cause of the heat of the animal body. According to the experiments of Lavoisier, the combustion or oxidation of the hydrogen would be superfluous; but Liebig contends that the combination (which he makes equivalent to a combustion of these elements) is a necessary result of the composition of the food, the blood, and of the air respired. The food he calls the fuel; and the oxygen produces the heat. The theory is highly ingenious, but wants the conclusiveness of demonstration. It still remains to be demonstrated, that the oxygen consumed in breathing combines with the carbon and forms carbonic acid, since this acid may be secreted, already formed, from the blood. We also need much more proof than Liebig has given us, that hydrogen unites with oxygen and forms water in the body. We need experimental demonstration.

It is a curious fact, that thirteen ounces of carbon, or charcoal, in

the form of gas, should be evolved daily from the lungs, and that thirty-seven ounces of oxygen should be consumed in the same time, in the process of breathing, and that just this quantity of oxygen is found united with the expired carbon.

Agreeably to the law of heat, by which, when a fluid body is converted into vapor, heat is absorbed into the vapor, if the warmth of the atmosphere is greater than the warmth of the body, a perspiration is produced, or a secretion of water by the skin; and this perspiration, or water, being converted into vapor by the heat of the body and of the atmosphere, the heat of the body is abated as fast as it accumulates.

ANODYNE.—All those medicines which ease pain and procure sleep are called anodynes. Opium, laudanum, morphine, Dover's powder, poppy tea, hop tea, lettuce tea, belladonna, paregoric, ether, camphor, prussic acid, musk, and castor, with many other articles, are of this class of medicines.

ANODYNE BALSAM.—This mass is composed of equal parts of camphor, castile soap, and opium, beat together in a mortar. One pill of the common size is the usual dose. This form improves the effect of the opium very much. Some people can take the anodyne balsam who cannot take opium. It is used in bowel complaints, and all painful diseases which prevent sleep. In coughs and affections of the lungs it is often found to be more serviceable than opium alone.

ANTHELMINTICS.—All medicines used to dislodge worms from the stomach and bowels are called *anthelmintics*.

ANTIEMETIC.—Medicines which prevent or stop vomiting. The most effectual antiemetics are, opium in some of its forms, camphor, peppermint, essence of cinnamon, essence of tansy, and the carminatives in general.

ANTIMONIAL POWDER.—This material is supposed to be the same thing as the James' powder. The powder, when good, is white, and without much of any taste. The gray powder is an inferior article. The antimonial powder is obtained by heating the sulphuret of antimony and the shavings of hartshorn, first to a red, and afterwards to a white heat, in an earthen crucible. It is composed of the rust or oxide of antimony, and the phosphate of lime. The sulphuret of antimony is a native ore, of a metallic lustre, and bluish color. The phosphate of lime is the material of which bones are chiefly composed, as well as horn.

The antimonial powder is one of the most valuable articles in the catalogue of medicines. It has the property of raising a sweat in a very high degree. In a large dose, it acts as an emetic and cathartic. It doubtless has a tendency to increase all the secretions. In fevers it is one of our principal remedies. By way of eminence, it has been called the fever powder. In low, malignant fevers it is not so appropriate as in those of an inflammatory nature.

The ordinary dose of the antimonial powder, for an adult, is six grains. For a child a year old, one grain. For a child from two

to four years old, two grains; and from four to twelve years old, four grains. The powder may be given in syrup, molasses, or thick gruel.

ANTIMONY.—See *Tartar Emetic*.

ANTIPHLOGISTIC.—Everything which lessens the heat of the body and diminishes inflammation is called *antiphlogistic*.

ANTISCORBUTIC.—Medicines which cure the scurvy. All the acids, both mineral and vegetable, are antiscorbutics. The citric acid, or the juice of lemons, is the most curative. All green, fresh vegetables and fruits are antiscorbutic, such as celery, dandelions, and cabbages, apples, oranges, and cocoanuts. The wood sorrel is a good antiscorbutic.

ANTISPASMODIC.—Any medicine which will relieve spasms, cramps, and convulsions, is called antispasmodic. The most powerful antispasmodics are opium, ether, and camphor. Next to these, are valerian, musk, castor, belladonna, cicuta, ammonia, assafoetida, Hoffman's anodyne liquor, and chloric ether. Many other agents will act as antispasmodics, such as cold water, ice, quinine, blue vitriol, and emetics of all kinds.

ANTRUM OF HIGHMORE—Antrum Maxillæ Superioris.—“A large cavity in the middle of each superior maxillary or upper jaw-bone, between the eye and the roof of the mouth, lined by mucous membrane, and communicating with the nose.”

This cavity is sometimes diseased. The most common disease of the antrum is inflammation, terminating in an abscess, or a collection of matter. A formation of matter is generally preceded by acute pain and swelling of the cheek, with some degree of fever. After maturation has taken place, the symptoms of inflammation and fever subside, but a constant aching pain or uneasiness will be felt, and the swelling gradually increase until the matter is discharged. Inflammation in this cavity, as well as in other situations, may arise from cold, or take place without any apparent cause, but is generally produced by the irritation of decayed teeth, or from blows upon the cheek. Abscesses in the antrum sometimes break through into the mouth or nostril, or they may point externally, and discharge through the cheek; but generally, an artificial opening will be required. When it is ascertained or strongly suspected that there is a collection of pus in this cavity, the mouth should be examined, and if either of the molar or double teeth on the upper jaw be loose, carious, or preternaturally sensitive, it should be extracted, and a free opening made by passing a trocar, or some strong sharp-pointed instrument, up through the socket into the antrum; but, if all the teeth are sound, or have all been extracted before, an incision should be made through the membrane of the mouth above the socket of the second double tooth, with a trocar or strong pair of scissors. The cavity should be syringed with warm water, soap and water, or a weak solution of chloride of soda. Should the discharge be profuse or fetid, there will be reason to suspect that there is some loose piece of bone, for which search should be made with a probe; and if any such be

found, it must be removed without delay, the aperture being enlarged, if necessary.

"Dropsy of the Antrum."—The antrum may become enormously distended, and its parietes (walls) thin and crackling on pressure, in consequence of an accumulation of its natural clear mucous secretion, if the aperture in the nostril has become obliterated." In these cases an opening must be made in the manner above described. Malignant and non-malignant tumors are sometimes developed in the antrum, each of which requires a particular mode of treatment; but to go into the particulars of these is unnecessary in a work of this nature.

ANUS.—The lower extremity of the bowels. It is the outlet of the body, the fundament. It is surrounded with a strong muscle, which contracts after a discharge from the bowels, and closes the passage. This part is subject to various diseases, such as the piles, relaxation, falling down, ulceration, and cancer.

AORTA.—The aorta is the largest blood-vessel in the body. It is an artery. The blood passes through this vessel to all parts of the body. It receives the blood from the left ventricle of the heart, takes a turn in the chest, there it gives off the arteries which supply the head and upper part of the body; it then descends into the belly along the left side of the back bone, and at the bottom of the belly divides into two smaller arteries, called the iliacs. When the belly becomes emaciated and thin, the beating of the aorta can be distinctly felt. This vessel is liable to aneurisms, or a rupture of its coats.

APOPLEXY.—Usually, in a fit of the apoplexy, the person falls down and becomes insensible; the face is red and swelled, the eyelids are half closed and fixed, and the veins of the temples and neck are enlarged and full of blood. In most cases, the person makes a snoring noise, as if in a profound sleep, and lies as motionless as in death, although, in rare instances, there will be some convulsive motions. The pulse and breathing all the while continue, although the breathing is unnaturally laborious. In this state the person will often continue for several days, and sometimes recover, although in the majority of cases the disease *proves fatal*. The patient does not froth at the mouth, as in epileptic fits, and apoplexy is much longer in its duration. The continuance of the pulse and of the breathing distinguishes apoplexy from fainting. This disease is apt to affect one side of the system more than the other, and the side which is least affected will be the more convulsed. The muscles of the face will be sometimes exceedingly convulsed, and give to the face the most frightful expression, especially the expression of the eyes, which will be twitched and drawn in every possible direction. In some instances, the face will become purple; in other instances, the disease will come on gradually; the face will be pale and bloated, and the insensibility will steal on by degrees, beginning with loss of memory, drowsiness, difficulty of speaking, and dizziness, and the person will seem to be only a little lost, or delirious. The extremities will be

cold and the pulse weak, small, and intermittent. A palsy of some part of the body is very apt to follow, or to be produced by, a fit of the apoplexy. The faculties of the mind are generally injured, and sometimes destroyed. The memory and the faculty of speech are the most apt to suffer. The whole of one side will often become almost as motionless as if dead; this is called hemiplegia.

If the fit continues very long, and the snoring and breathing become louder and more labored, the power of swallowing lost, the insensibility more profound, and the person has advanced beyond his sixtieth year, it will be very likely to terminate fatally. And if the person recovers entirely, or in any degree, from the first attack, he is very liable to be attacked again and again, until death ends the scene. The apoplexy is *not*, however, *so fatal a disease as it is commonly supposed to be*; recoveries do take place, and sometimes, though rarely, they are complete.

Domestic Remedies.—The first thing to be done, in a fit of the apoplexy, is to loosen the clothes, especially anything about the neck, and to place the person on a bed, or in some place where he can lie in a horizontal position. Cold water should then be dashed on the face and head, and if the person can swallow, some of it should be given him to drink. If no practised person is near to let blood, an injection of common table salt, dissolved in warm water, should be immediately resorted to. If the fit has come on just after a full meal, an emetic of ipecac., or of powdered alum, should be given, in order to remove the pressure upon the stomach, and lighten the digestive powers. A tea-spoon even full of the ipecac. will generally prove sufficient, or a heaping tea-spoonful of the powdered alum. Fifteen grains of the powdered leaves of lobelia may be used, where the other articles cannot be speedily obtained. But no emetic should be given, unless the stomach of the person has been recently overloaded with food or indigestible substances. Mustard poultices should be placed upon the feet; and leeches, if they can be obtained, and any one can manage them, should be applied to the temples.

If the person is able to swallow, a full dose of oil, salts, or aloes, should be given, and a free evacuation of the bowels procured. If nothing can be swallowed, the bowels must be emptied by the use of purgative injections, such as senna and salts, ipecac., or anti-mony. Stimulating injections, such as the spirits of turpentine, after a proper evacuation of the bowels, have a strong tendency to awaken the vital powers.

Professional Remedies.—If the person is attacked in the plenitude of strength and of health, and the condition of the blood-vessels of the face and neck indicate that the brain is oppressed with blood, blood should be immediately drawn from the arm; and if the first bleeding does not remove the state of insensibility, a second bleeding should be performed in the course of eight or ten hours. It is safer, perhaps, to apply leeches to the temples and head, than to draw blood by venesection, a third time, where the abstraction

of more blood seems to be required. The quantity of blood drawn should always be graduated by the habits and the previous state of the health of the patient. If the person has been previously out of health, or in a feeble state—the face pale, and the blood-vessels of the face and temples not turgid, and the pulse weak and intermitting—blood should be drawn sparingly, if drawn at all, and should always be done by leeching, if possible. Where the head is hot, or warmer than natural, cold vinegar and water should be kept constantly applied. If the kidneys are bound, the water should be quickened by the use of the nitrate of potash and cream of tartar. Or if the skin should be dry, small doses of ipecac. or of antimony should be given at proper intervals, to excite a gentle perspiration. The drink should be cold water, gruel, bread-water, or balm tea. No stimulating drinks, such as brandy, wine, or rum, should ever be given. When the patient begins to recover, if debility remains, the strength should be restored by camomile tea, quinine, columbo root, and the mineral acids, broths, soups, and a nourishing diet.

In some cases, where the fit is followed by a paralysis, stimulating things, such as mustard-seed, the tincture of guaiacum, camphor, ammonia, and the volatile oils, made into essences, will become necessary. But none of these things should be given while there is any congestion of the brain.

Intoxication and the effects of opium and other narcotics will often so nearly resemble apoplexy, that it will sometimes become difficult to distinguish between them. The effects of an over-dose of opium, especially, are very nearly those produced by an apoplectic fit. The judgment must be determined by circumstances, and the testimony of friends and acquaintances. A stroke of the sun is supposed to be the same disease, and requires a similar treatment, as apoplexy.

The prevention of diseases, in general, is found to consist in the avoidance of those causes which produce them. This is the only way to prevent a fit of the apoplexy. This disease is produced by intemperance, either in eating or drinking. Apoplexy arises from an effusion of blood, or of serum, which is the watery part of the blood, upon the brain; and whatever strongly forces the blood upon this organ will produce the disease. We knew of one case which was produced by the position and the exertion of drawing on a boot. Violent fits of passion, intense study, and all great mental efforts, whether at the bar, in the pulpit, or in the mechanic's workshop, will occasion the disease. Exposure to intense heat or cold will often bring on the fit, as well as blows, wounds, and concussions. Great anxiety, loss of sleep, and disappointment, by exhausting the nervous system, are often the occasion of apoplexy. On dissection of those who have died of the disease, there is commonly found either a quantity of water or of blood which has been let loose upon the brain.

A person, therefore, who suspects any disposition to apoplexy, should avoid, as far as possible, all the causes which produce it.

It is said that people of large heads, short necks, and of a gross habit, are more liable to it than others; it therefore becomes people of such a make to be more studious in avoiding the causes of the disease. Dizziness, drowsiness, obscurity of the sight, and thick-ness of hearing, are supposed in many instances to be symptoms of an approaching fit. A timely loss of blood may, in such cases, counteract the disease; but temperance and suitable exercise will do more.

APPLE PERU — *Datura Stramonium*. — This plant is more commonly called the thorn-apple, because it bears a fruit somewhat resembling a green apple covered with thorns. It is very common in New England, and known to almost everybody. It grows in the rich, fertile spots about barns and houses, and may be gathered in the months of August and September. There are two kinds of the thorn-apple; the flower of one a clear white, and of the other purple, but the virtues of each are nearly the same. The leaves are shaped like an egg, and have a nauseous taste and sickish smell. In both varieties the stem is erect, forked, and from two to four feet in height. The leaves, branches, stem, fruit, seeds, and root of this plant are strongly narcotic, and taken in any considerable quantities, are very poisonous. An over dose of this substance produces dizziness, delirium, stupor, trembling, dilated pupils, a small, weak pulse, fainting, and death.

The thorn-apple is a medicine much more used and better known in this country than in England. In epileptic fits it has been long celebrated. In asthma its reputation is equally high. The dose of the powdered leaves for an adult is one grain gradually increased; of the powdered seeds, half a grain; of the inspissated juice or extract, one grain; and a dose of the tincture is from fifteen to twenty drops. The tincture is made by putting one ounce of the dried leaves into half a pint of new rum, letting it stand for a week, and then straining it. The tincture is the most suitable preparation for children. The dose for a child from two to four years old is from two to four drops.

This medicine has been employed in palsy, painful menstruation, rheumatism, tic douloureux, nervous headaches, tetanus or locked jaw, and many other painful affections. It formerly had great repute in the case of insanity. The leaves are sometimes made into cigars and smoked for the asthma, or they may be smoked in a pipe. It alleviates the distress and helps the breathing.

APTHÆ. — See *Canker*.

AQUEOUS HUMOR. — This substance is a watery fluid which fills both chambers of the eye. It amounts in weight to five or six grains. When the eye is punctured, this humor runs out; but if the puncture heals kindly, the humor is renewed again. It is enveloped in a fine membrane. There are two other humors in the eye; one is called the *crystalline humor*, and the other the *vitreous humor*.

ARACHNOIDES. — This is a thin membrane of the brain, without blood-vessels and nerves situated between two other mem-

branes, called the dura mater and the pia mater. It surrounds the whole brain, and the oblong and spinal marrow.

ARNICA MONTANA. — In paralytic and other nervous affections, in fevers, and as an external application to bruises, the arnica is a good remedy. It is given in small doses.

ARROW-ROOT. — The arrow-root in use among us is the product of a plant which originally came from the East Indies, but is now cultivated in the British West India Islands. The plant from which the root is taken grows to half a yard in height, is perennial, has an upright stalk, terminated by bunches of flowers. The roots of this plant are thick and exceedingly knotty. The plant is propagated by parting the roots in the spring.

The arrow-root is the most nutritious root which has ever been discovered. The powdered root affords a very nourishing diet for children. Boiled in water, it forms a transparent jelly; and mixed with milk, it makes a very palatable and easily digested porridge. To make a jelly of the arrow-root, take a table-spoonful of the powder, and as much cold water as will make it into a paste; then pour on half a pint of boiling water, stir it briskly, and boil it a few moments, when it will become a clear, smooth jelly. This jelly is sometimes mixed with calf's-foot jelly, and given to debilitated children and invalids.

The arrow-root makes excellent starch. In the West India Islands the starch is made by digging up the roots of a year old, washing them well in water, beating them in a large, deep, wooden mortar to a pulp, and then throwing the pulp into a large tub of clean water: the whole is then well stirred, and the fibrous part wrung out with the hands and thrown away. The milky liquor is passed through a hair sieve, allowed to settle, and the clear water drained off. At the bottom of the vessel is a white mass, which is again mixed with clear water and drained. The mass is then dried on sheets in the sun, and is pure starch.

In the bowel complaint, and other diseases of young children, the arrow-root gruel is the best food which can be given them. It is the lightest and easiest digested of any vegetable substance in use. In fevers it is peculiarly suitable. It neither heats the body nor disturbs the irritable stomach. If children are troubled with wind, a little nutmeg, or two or three drops of the essence of caraway seed, may be added to the gruel.

ARTERY. — The blood-vessels are of two kinds, arteries and veins. The structure of the arteries is materially different from that of the veins. The sides of the arteries are stiff and hard, and do not collapse or fall together when empty. The sides of the veins are soft and flabby, and readily fall together when emptied of the blood. In cutting into a piece of lean boiled beef, we often see an open artery, sometimes large enough to thrust the little finger into. The veins are never seen open in dead animals. The blood in the arteries is of a light red; that in the veins of a purple color. The blood in the arteries is the vital blood; that in the veins will not support life. If the purple blood in the veins, at any time, gets

into the arteries, and circulates through the brain, it destroys life immediately. The face turns purple, and the person instantly loses his senses. The hollow or inside of the arteries is entirely smooth; the cavity of the veins is filled with little valves, arranged at short distances from each other, so as to hold the blood after it has passed them, and prevent it from going back. These valves are little membranes which cut the veins into so many separate chambers. It is very important for people to know the difference between the arteries and the veins, and to distinguish the light-red, or vital blood, from the purple, or dark-red blood. The two fluids are widely different in their properties.

The arteries beat in company with the heart, and give rise to the pulse. By ascertaining the number of times which the pulse beats in the wrist, in a minute, we at the same time find how many times the heart beats, and the degree of swiftness of the circulation. The pulse is not only felt in the wrist, but in any part of the body where an artery runs near the surface. The temporal artery will give us the state of the pulse nearly as well as the artery in the wrist. The puncturing of an artery is much more dangerous than that of a vein. From the heart proceed two large arteries, the pulmonary and the aorta, which branch out over the whole body into an endless number of smaller ones. The pulmonary artery issues from the right ventricle of the heart, and goes to the lungs, where, by the process of breathing, the venous blood is changed in its color and receives its vitality; the aorta issues from the left ventricle of the heart, and distributes its branches to every part of the body. When an artery is pressed together by the fingers, it will spring into shape again; but a vein has no elasticity. The arteries are vessels which convey the blood from the heart, and the veins return it to the heart.

ASCARIDES. — Pin worms, or thread worms, which burrow about the lowest portion of the bowels, or rectum. They are never more than about half an inch in length, and of the size of a cambric needle. They molest children and feeble people, and produce an intolerable itching about the anus. They may be destroyed by a dose of aloes. See *Worms*.

ASCITES — Dropsy of the Belly. A tense, inelastic swelling of the abdomen, from accumulation of water. The fluctuation of the water in the belly is often very perceptible, especially on turning from one side to the other. It comes on with the same symptoms which accompany dropsy in general, and the treatment is the same. See *Dropsy*.

ASSAFŒTIDA. — This is the most powerful of all the fetid gums. It is brought from Persia in irregular masses, composed of various little shining lumps, which are partly of a reddish, partly of a whitish, and partly of a violet color. Those masses are the best which are clear, and of a pale reddish color, variegated with a great number of elegant white tears. It is excessively fetid, and extremely volatile, on which account, it cannot be kept long without losing more or less of its strength. It yields all its virtues to spirits of wine or new rum.

The gum is obtained from the roots of the assafœtida plant. The roots are tapped, and the gum oozes out and hardens in the sun.

The gum has a bitter, acrid, pungent taste, and melts in a moderate heat. The dose of the pure gum is any quantity between five and twenty grains. It mixes with water and makes a milky mucilage. The best form of giving it is the tincture. Pills are easily made by gently heating the gum and rolling little pieces with the fingers. Two pills, of the common size, are an ordinary dose for an adult. Children should take the mixture or the tincture. The tincture is made by putting two ounces of the gum, broken into pieces, into a pint and one gill of new rum, and allowing it to stand for one week. Strain the liquor, and it is fit for use. The dose for an adult is any number between ten and sixty drops. The dose of the tincture, for a child of two or four years old, is from ten to twenty drops.

The assafœtida is given in all nervous affections, but is the most celebrated in removing the hysterics and hypochondria. It quiets the nerves and induces sleep. It is good for a cough and catarrhal affections. In all cases of spasms, it is a very potent remedy.

ASTHMA. — The asthma is a disease of all countries and climates. It affects the young and the old, but for the most part, does not discover itself until after the age of puberty. It affects alike every kind of temperament. Its attacks are periodical, and in this respect it resembles many other diseases which afflict mankind.

The asthma generally attacks people in the night-time, soon after they have retired to rest, but it sometimes comes on in the day-time. A want of breath is commonly the first notice which the person has of its onset, and he is obliged immediately to rise up in bed. He feels a great tightness across the chest, and wants more air. The respiration is laborious and accompanied with a wheezing noise. The wheezing can generally be heard over the whole house, and speaking is very difficult. There is often a disposition to cough. There is sometimes such a want of breath as to give the lips and face a purple color, as if a partial strangulation had occurred; but notwithstanding the frightfulness of the symptoms, the disease rarely, if ever, proves fatal. The patient feels as if the air-vessels of the lungs were all closed up, and that he should soon choke; but after a while, towards morning, the breathing becomes a little freer, and the sense of suffocation gradually abates. Perhaps a little mucus is coughed up, some relief takes place, and the exhausted sufferer falls asleep. In some cases of the asthma the pulse is not disturbed, but more commonly it is frequent and small. There is apt to be both heat and thirst. The urine is in the beginning pale, and increased in quantity, but on the departure of the fit it is high-colored and deposits a sediment. The face is generally pale and shrunk.

Through the day the patient will often remain comparatively

free from distress; but at the approach of evening, the wheezing, the suffocating breathing, and the sense of tightness in the chest, return, and continue about as long as they did the night before. Where there has been a considerable respite during the day, some little sleep may be obtained in the fore part of the night, but morning seldom comes round without having had a suffocative fit sometime during the night. In this way the asthma goes on, for three, four, or five days, and sometimes for a week or a fortnight, without much abatement. The sooner the expectoration commences the shorter will be the process of the disease. Relief is quite sure to come with the free secretion of the mucus of the lining membrane of the lungs. And this resolution of the disease by the secretion of mucus shows the asthma to be an inflammation of the mucous membrane of the lungs, as much as a similar resolution, in an influenza, or catarrh, shows that disease to be an inflammatory one. The asthma, in general, goes off gradually; the expectoration increasing every day, and the fits growing less violent every night, until it entirely disappears. Where a person, however, has once been the subject of this disease, he is pretty sure to be tormented with returns of it through life. In some instances of the asthma, there will be no expectoration of phlegm. These instances are called the dry asthma, where the disease is resolved without the mucous secretion. Such instances have been called spasmodic asthma, but they furnish no more evidence of spasm than any other inflammation which is resolved without suppuration or some extraordinary secretion. In the asthma there is always some degree of fever, which is evinced by a furred tongue, increased heat, thirst, and loss of appetite. In some instances of this disease, people during the day-time will be about their usual occupations and feel nearly as well as usual, but suffer severe paroxysms during the night.

The whooping cough, measles, and other affections of the lungs, often lead the way to the asthma. People appear to be born with a disposition to this disease in the same way that they are to many other disorders. The texture of their lungs, or lights, is destined to be affected in this particular way. The external causes which bring it on are better known than the condition of the lungs which fits these causes to operate. The sudden suppression of the perspiration is probably the most frequent cause. Cold and wet feet, damp rooms, the changes of the atmosphere, and all excesses in eating and drinking, will produce the disease. Going from the town to the country, or from the country to the town, will often bring it on. The disturbance of the passions and feelings also produces it. Some people experience a return of it every fall, on the appearance of cool weather and frosts; others will have it in the spring, and others again in the summer time. Either cold, heat, or moisture, appear to produce it equally alike.

Domestic Remedies.—On first ascertaining the nature of the disease, an emetic of ipecac. should be immediately given, or vomiting should be immediately excited by some other means. A wine-

glassful of lamp oil is sometimes given. A tea-spoonful of powdered alum, mixed with molasses, and repeated every fifteen minutes until it operates, is a very effectual remedy. The lobelia has, however, been used with singular success. An ounce of the dried leaves may be steeped in a pint of water, and a table-spoonful given every fifteen minutes until vomiting is produced. Warm flax-seed tea should be given for drink, or any kind of herb tea which will produce a sweat. Breathing the steam of hot water will sometimes relieve the feeling of suffocation and moderate the fit. Burning in the room a piece of paper which has been soaked in a solution of saltpetre and dried by the fire, will often afford instant relief. But the chief reliance must be placed upon vomiting. Some people have taken an emetic every day for a fortnight. The syrup of squills, given in tea-spoonful doses every half hour, will generally procure relief and moderate the violence of the fit. But the most effectual remedy which we have ever tried is a tea-spoonful of ether, mixed with forty drops of laudanum, in a wine-glass of water. This should not be given oftener than once in four or six hours, and not repeated more than three times without an interval of eight hours. Goose oil is a very good thing to relieve the wheezing. Small doses of ipecac., or two grains at a time, repeated every two hours, will often succeed in producing a perspiration and moistening the lungs. Dr. Cullen relied principally upon laudanum alone, in thirty or forty drop doses. He thought, however, that there were some cases where it could not be given, being too much of an inflammatory order. Strong hot coffee has been found to relieve the fits. Intoxicating drinks only add fuel to the fire, and always increase the disease. A drink made of lemon juice and flax-seed tea, or a solution of the slippery-elm bark, or of gum arabic, sweetened with honey or sugar, promotes the secretion of mucus in the lungs. In general the most certain expectorants will be attended with the most certain abatement of the disease. In violent cases, leeches should be applied to the chest, succeeded by large blisters.

Professional Remedies. — Although, in general, blood-letting is needless and often hurtful, there will be instances where it must be resorted to. It is a remedy which always has been and always will be used. So long as people observe that spontaneous bleeding from the nose, or any other part of the body, is attended with relief, or produces a cure of the headache, or any other pain, the same effect will be imitated by art. In young people, of a plethoric habit, bleeding is often attended with instantaneous relief. The tincture of digitalis is a remedy of peculiar efficacy, and will often succeed in allaying the distress of breathing when other means have failed. But in the use of the digitalis great caution must be employed not to surcharge the system with it. Smoking the leaves of the stramonium, or bitter apple, moderates the violence of the fits. Almost all old asthmatics get into the habit of smoking tobacco. Tobacco undoubtedly alleviates the disease, although it rarely, if ever, cures it. Antimonials are extremely effectual in

softening the skin, promoting the secretion of the mucus, and moderating the pulse. The Hive Syrup, prepared by Dr. Cox, of Philadelphia, is a compound of great value in the asthma. A teaspoonful of it may be taken once in two hours, until the breathing is relieved. The food should be light and nourishing, after the subsidence of the fits, and, where debility remains, the quinine, colombo root, and other strengthening medicines, should be resorted to. Flannel should be worn next to the skin the whole year round, and the strictest temperance be practised, both in eating and in drinking.

A free state of the bowels is an object of the highest importance in every stage of the asthma. Castor-oil, or some gentle cathartic, where the other medicines do not move the bowels, should be given as often as every other day. Sleep, if possible, should be procured every night, by Dover's powder, or lactucarium, or some other means, and the strength supported with plum porridge, broths, and gruel. Almost all asthmatics sit in bed, supported by pillows. But whatever position the patient takes to induce sleep and procure rest, he should keep himself well covered, and the room well ventilated and free from smoke and suffocating vapors.

The idea that the asthma is ever a nervous disease, according to the classification of Dr. Cullen, appears to us a mere conjecture. What disease of the nerves, merely, ever eventuates in a functional secretion, like the mucous expectoration of the asthma? Mere spasm requires no such mode of relief. As well might we call an inflammation of the eyes, which ends with a mucous secretion of the lachrymal glands, a nervous disease, as the asthma. Some attacks of the asthma go off without expectoration, and so do some inflammations of the membranes and other parts, without affecting the ordinary function of the part. The erysipelas will appear and disappear, without suppuration, or any visible change of the function of the skin. The redness and swelling subside, and the skin is left, to all appearance, in the same state as it was in before the disease commenced.

ASTRINGENT.—Whatever substance puckers the mouth, or contracts the fibres of the flesh, is termed an astringent. Substances endowed with the property of astringency render the flesh, membranes, and tissues, denser and firmer. They draw the living fibres into a smaller compass, and increase their strength. When the bowels, for instance, are in a relaxed state, it is proper to give astringents. Alum, sugar of lead, borax, creosote, white vitriol, blue vitriol, tonic acid, nut-galls, logwood, and white oak bark, are some of the most potent of this class of medicines. In the disease of women called the whites, astringent injections are among the best remedies. In diabetes, or an excessive flow of the urine, astringents are indispensable.

AURA EPILEPTICA.—A sensation felt by epileptic people, or those subject to falling fits, as if cold air were creeping along from one part of the body to another. Sometimes this sensation is felt in

the arm, and, at other times, in the leg or body. It is the forerunner of a fit. By pressing hard upon the part from which it starts, or by placing a ligature round the limb, the fit is supposed, in some instances, to be prevented. It always begins below, and travels upwards to the brain.

AUSCULTATION.—This term signifies, in medicine, the act of listening to the sounds produced by the motion of the heart, and by the function of breathing. To assist the hearing, an instrument has been invented, called the stethoscope. By placing the ear closely upon the chest, and listening attentively, the natural sound made by breathing can be learned, and this can be compared with the sounds produced by the lungs in a diseased state. If the lungs are ulcerated, a hollow, cavernous sound will be heard, and a rattling made by the air in passing through the matter. Other sounds denote different states of disease. The stethoscope renders the sounds made in breathing very distinct. In consumption, and other affections of the lungs, many physicians acquire much skill in detecting the precise condition of that organ. This instrument should be in the hands, not only of every physician, but of every person who wishes to become acquainted with the diseases of the body. The stethoscope is much used by Dr. James Jackson, of Boston, one of the most eminent physicians in our country.

AXILLA.—The arm-pit.—In the arm-pits are situated the axillary glands, which secrete a fluid of a peculiar odor, and which stains linen of a yellowish color, and destroys the colors of clothing. One person may easily be distinguished from another by the odor of this secretion.

AZOTE.—This is one of the constituents of the atmosphere which we breathe. It composes seventy-eight parts in a hundred of the common air; the other constituents are oxygen and carbonic acid. Azote is sometimes called nitrogen. No animal can live in it, and no substance will burn in it. Azote is rather lighter than the vital part of the air. It enters largely into the composition of all animal substances. If a burning lamp is placed in a tub of water, and a large tumbler inverted over it, the oxygen, or vital air, will be consumed in a short time, and the light will go out. The azote will be left in the tumbler, together with the smoke, and the water will rise in the glass about one fifth of its height, which shows that a part of the air has been consumed.

B.

BALLSTON MINERAL SPRING.—The water of this spring contains a large quantity of carbonic acid gas, salts, and iron. Both the acid and the air are strengthening, and create a strong appetite. In dyspepsia, nervous complaints, king's evil, or scrof-

ula, chronic diseases of the liver, dropsy, and almost all disorders without fever, the Ballston spring water is found very healing. The village of Ballston, whence the spring takes its name, is situated in Saratoga county, New York, about ten miles southwest of the Saratoga springs. This spring is much frequented from all parts of the Union. There is a sulphur spring in the same place.

BALM.—This common but useful herb grows in almost every garden. It has something of the smell of the lemon, and a grateful taste. A tea made of the balm is a very good drink in fevers, especially where the nervous system is very much excited. It is cooling, soothing, and a gentle promoter of the perspiration. In common headache, if drank hot and freely, it often produces complete relief. Some people of delicate nerves find it a much better drink than cold water, or the China teas.

BALSAM.—The word balsam is applied to substances which are supposed to possess peculiar healing qualities. Some balsamic substances are found in a natural state, such as balsam of Tolu, balsam copaiva, balsam Peru, balsam storax, balsam opolosam, all which are liquid. Benzoin, dragon's blood, and storax, are balsams congealed into a solid state. There are many artificial medicines sold under this name, such as balsam of life, and anodyne balsam. The natural balsams have a strong aromatic taste and smell, and are commonly of the consistence of molasses. Balsams are of an oily, resinous nature.

BALSAM COPAIVA.—This balsam oozes from the bark of a tree which grows in the West India Islands and South America. It is of a yellowish color, and about as thick as honey. It has an aromatic smell, and an acrid, pungent taste. It is ropy and tenacious. It is soluble in alcohol and the essential oils.

This balsam has the property of increasing the discharge of the urine. To produce this effect, it must be given in a dose of thirty drops, three times a day. It should be dropped upon a tea-spoonful of fine sugar. In a large dose, it operates upon the bowels. It has been esteemed an excellent medicine in coughs and consumptions. Eight or ten drops may be given to a child two years old. The balsam copaiva has, by a chemical process, been reduced to a solid state, and may be given in the form of pills. This is, in many instances, the best way of giving it. The copaiva gives to the urine a violet smell, and, in a large dose, produces strangury. In the disease of females called the whites, it is accounted one of the best medicines in use.

Dr. Chapman, of Philadelphia, ranks the balsam of copaiva among the most effectual means of curing the clap, or gonorrhœa. His method of giving it is, to take two tea-spoonfuls of the balsam of copaiva, one tea-spoonful of spirits of red lavender, one tea-spoonful of the sweet spirits of nitre, one tea-spoonful of laudanum, two ounces of gum arabic, and a gill of water, and mix them all together in a phial. Of this mixture, he gives a table-spoonful, morning, noon, and night. Taken in this way, it will effect a

cure in three or four days. "*But to obtain this free and prompt operation of the medicine, the patient must honestly abstain from every stimulating article of diet or drink, and impose upon himself a complete state of rest.*" We believe this remedy of Dr. Chapman often fails from the sheer want of attention to the injunction which he has added respecting the diet, drink, and more especially rest.

BALSAM OF FIR.—This balsam exudes from the trunk of the hemlock fir, which grows in Canada. It is obtained by making incisions into the bark. It is of a light yellow color, aromatic smell, and pungent taste. It increases the flow of the urine, opens the bowels, and loosens the phlegm in a cough, very much like the balsam of copaiva. The dose for an adult is from thirty to forty drops. It is used in the cure of gonorrhœa, the whites of females, and diseases of the lungs. The dose for a child two years old is ten drops.

BALSAM OF TOLU.—The Tolu balsam comes in little gourd-shells, from the province of Tolu, in South America. It is obtained from the trunk of a tree, by making cuts into the bark. It exudes from the tree in a liquid form, but thickens by age, and finally concretes into a solid mass. It has a fragrant odor, and a warm, sweetish taste. It readily dissolves in alcohol, and imparts its smell and taste to water. In the shops, it is sold in the form of a syrup, under the name of the syrup of balsam of Tolu, but more commonly balsam of Tolu. The balsam is first dissolved in spirits, in the proportion of an ounce and a half of the balsam to a pint of new rum, or diluted alcohol. The spirituous solution, or tincture, is then mixed with simple syrup, in the proportion of an ounce of the tincture to two pounds of the syrup. The dose for an adult is two tea-spoonfuls; for a child, one tea-spoonful. It is one of the most agreeable cough medicines in use. For infants, and little children, it is a good medicine, on account of its mildness. It is used almost entirely for coughs, but is, no doubt, favorable to ulcerations of the stomach and bowels. Its balsamic properties are much milder than those of the copaiva, fir, and Peru, and there is but very little danger of taking an over-dose. Equal parts of the syrup and almond oil form a very good expectorant.

BASILICON OINTMENT.—The basilicon ointment is made by taking equal parts of yellow resin, yellow wax, hog's lard, and sweet oil, melting them together, and allowing the mixture to cool. The ointment can be made by melting together eight parts of hog's lard, five parts of resin of pine, and two parts of yellow wax; but this way of making it is apt to give it too much hardness for cold weather. The basilicon ointment is much used for healing sores, wounds, and corruptions of the skin. For fresh wounds, it is too stimulating; but in sores which are rather slow in healing, it is a very good dressing.

BATHING.—There can be no doubt but cleanliness promotes health and prevents diseases, especially diseases of the skin. If people are much in the open air, temperate, labor constantly, and

perspire much, they seem to do much better without bathing than those who are housed continually, sedentary, and seldom secrete by the skin. Perhaps such people acquire a hardness of constitution, and a degree of health, which defy the ordinary causes of disease. The peasants of the north of Europe, especially in Russia, are said to be extremely healthy, although they are excessively dirty, and pay no manner of attention to bathing, or cleansing the skin in any other way. If people constantly wear clean clothes, and change them often, it assists very much in keeping the skin clean, and prevents, in some measure, the necessity of bathing. But when we reflect that the skin is a secretory organ, made up of an endless number of glands, which open upon the surface, and continually deposit a great mass of excrementitious matter, which not only blocks up the mouths of exhalent vessels themselves, but is, in a greater or less degree, reabsorbed into the system, unless timely removed, everybody of common discernment must perceive the propriety and benefit of frequent bathing. For this purpose, it is not necessary to have a bathing-tub, and a bathing-house, but a common tub, or a basin of water, with a piece of sponge, or an old linen or cotton rag, will answer all the purpose where greater conveniences cannot be obtained. So far as mere cleanliness is concerned, it matters but little whether the water is warm or cold. Warm water is the most solvent, and soonest removes the inspissated sweat. In a state of tolerable health, well-water will answer, both for summer and winter.

The warm bath brings the blood to the surface, and for the time being increases the perspiration. It softens the skin, opens the pores, and renders the joints and muscles more supple. In chronic inflammation of the internal organs, the frequent recall of blood to the surface is, no doubt, of the greatest advantage. It serves the purpose of a warm poultice to the whole skin. To produce much effect, however, a person must, in such cases, remain for some time in the bath, and resort to it often.

In nervous diseases, hypochondriasm, epilepsy, hysterics, palsy, and insanity, warm bathing affords the most essential relief, and is more restorative than almost any other remedy. The warm bath, to be of service, should be used as often as once a week, and, in many instances, it will be advisable to resort to it daily, or, at least, twice or three times a week.

The hot bath is, in some cases, more beneficial than the warm bath. The effect of the hot bath is to raise a sweat. The water must be raised to blood-heat, and as much hotter as the nature of the case may require. The hot bath is used for cold constitutions and chronic complaints, such as rheumatism, gout, and old complaints of the stomach, liver, bowels, kidneys, joints and muscles. It seldom fails of producing a profuse perspiration, and a more rapid circulation of the blood. In acute inflammations, unless they happen to be very slight, and confined to the surface of the body, the hot bath is decidedly dangerous.

The steam bath is of the same nature with the hot bath. No

greater degree of heat can be applied to the body by the means of steam than of hot water. The agency of vapor upon the skin is also the same with that of heated water. The vapor or steam bath has, however, of late, come greatly into vogue, and as it produces about the same effect as the hot bath, it is entitled to the same credit. Steam can be applied by sitting over a tub of hot water, with a blanket thrown over the head and body. The most effectual way of using the steam or vapor bath, is by means of a box large enough to stand upright in, and by admitting the steam through a hole in the box. The head and neck are put through a hole in the top of the box, and the body and limbs inclosed. The vapor bath is used for the same complaints as the hot water bath.

The cold bath is not only used to preserve the health, but to cure diseases. In almost all fevers, not attended with active inflammation, it has the most happy effect. It lessens the burning heat of the body, moderates the thirst, alleviates restlessness, abates the force of the circulation, and induces sleep. *The cold bath should never be used in the cold fit of a fever, or in any disease where there is a deficiency of heat.* There is no remedy in the treatment of fevers productive of better effects, if rightly and perseveringly used, than the cold bath. The most convenient way of using it is by washing the body over with a sponge or a cloth. This can be done as often as the symptoms of the fever become aggravated, and by people in every condition of life. To use the cold bath with the same efficiency with which we use other remedies in febrile diseases, it should be employed once in every two or three hours. It should never be employed when there is any considerable degree of perspiration, or when the pulse is feeble and small.

The cold bath is peculiarly efficacious in subduing the violence of scarlet fever. It may be employed in every stage of the disease where the heat and pulse are above what is natural, and with the greatest freedom. In the warm season, the bodies of children sick of the scarlet fever may be sponged with cold water every half hour.

Baths are often medicated with neutral salts, sulphur, acids, and other substances. Sea-water may be considered a medicated bath. The salts which it contains are medicinal, and will sometimes cure obstinate diseases of the skin. The sulphur bath is the most used of any of the medicated baths. This bath is employed warm, and is adapted to diseases of the skin, chronic rheumatism, gout, stiffness of the joints and muscles, palsy, green sickness, and obstinate affections of the internal organs. The acid bath, composed of aquafortis and marine acid, has been found serviceable in many obstinate diseases of the liver, peritoneum, and bowels. Common salt, infused into warm water, makes a very good bath for rheumatism, king's evil, and dyspepsia. The composition of mineral waters is commonly imitated in the formation of medicated baths.

The efficacy of bathing very much depends upon the constancy and perseverance with which it is used. In obstinate diseases of the skin, it must often be practised for months before any decided impression can be made.

In warm climates bathing is more practised, and, probably, is more necessary, than in cold climates. In Italy, Greece and Egypt, *public* baths were formerly instituted. Many attempts have been made among the moderns to establish public baths in the north of Europe, especially in Paris and London; but whether the climate is too cold, and the perspirable season of the year too short, or the utility of bathing is not so well understood by us as by the ancients, the attempt has always failed.

But were the health and beauty of the skin alone concerned, the practice of bathing must still be considered an inestimable benefit to mankind. In the hot season, boys in New England need no inducement to bathe, but girls are almost entirely out of the way of this practice. The benefit to girls is as great as to boys, and some plan should be adopted to make it as convenient for them to bathe as for boys. The cold bath is the most suitable for healthy people. It acts as an astringent upon the flesh, and renders all parts of the body denser and firmer. It hardens the body against the extreme changes of the atmospheric temperature, and fortifies it against disease. We would here, however, add a caution which should always be heeded. It is always hazardous to go into a cold bath in a state of exhaustion, or when a person is very tired, or when the system is in a profuse perspiration. The cold bath is always unsafe for people who are in a cold, debilitated, weak state of health. Females who have been weakened for a long time, by any disease peculiar to them, will be seriously injured by the cold bath. If the person is subject to cold hands and feet, or is pale and enervated, the cold bath will not be likely to answer a useful purpose.

The proper time to use the cold bath is when the skin is warm and dry.

The proper time to use the warm bath is when the system is somewhat exhausted and deficient in heat. But whether the bath is used in the morning, at noon, or in the evening, is a matter of secondary consequence. In general, the bath, whether warm or cold, should not be taken before breakfast, unless for some particular disease, when the time must be regulated by the heat of the body, the fever, and other circumstances.

The most extraordinary effects may be produced by a skilful use of cold, hot, and medicated baths. The most violent inflammations may often be entirely subdued, by the constant application of cold water, and water congealed to ice. Warm water, in certain states of an inflammation, is equally powerful. Cold water is one of the greatest anaphlogistics which we possess. We have often reduced a violent inflammation of the eyes by cold water alone. In fevers, we have seen it remove the heat and violence of the disease like a charm. It seems to quench the fire of a fever

as it quenches the thirst; and operates upon a parched skin as it operates upon an inflamed stomach. We believe that a fever may be cured by the cold bath alone. The mode of using the cold bath is a matter of minor importance. The shower-bath is preferred by some, the bathing-tub by others, and laving the body with a wet sponge or cloth by others. Each way may have its advantages, but convenience will probably decide in favor of the last method. Our advice is, never to spare the use of water in a fever.

BAYBERRY.—The bayberry is a bush which bears thick bunches of a greasy kind of berries, which remain after the leaves have fallen. It grows from two to six feet in height. The berries yield a kind of wax, of which candles are sometimes made. It is sometimes made into an ointment. The root of the bayberry, reduced to a fine powder, makes a very powerful snuff, useful in the catarrh and painful affections of the head. The snuff made from this root has been highly recommended in amaurosis, or affections of the optic nerve. In domestic practice, it has been much used as a remedy in jaundice. In small doses it is warming and stimulant; in large doses it operates as an emetic. It has some of the properties of ipecac., and being a native of our climate, should receive a more extended and accurate examination than has hitherto been given it.

BILE.—This secretion is often called gall. There are two kinds of bile in the liver and gall-bladder; one is called hepatic bile, because it is contained in the proper ducts of the liver, and the other the cystic bile, because it is contained in a cyst called the gall bladder. The hepatic bile is thin, of a faint yellow color, without smell, and very slightly bitter. The cystic bile, or that contained in the gall bladder, is thicker and more acrid, and of a yellow, green color. It is of the consistence of oil. The gall bladder is a reservoir. The hepatic bile only flows into the intestines during digestion; at other times it retreats into the gall bladder. After digestion is over, the mouth of the common duct, which carries the bile into the intestines, contracts, and no more bile can pass until digestion begins again. There are three ducts in the liver. The first takes the bile which is secreted in the liver and carries it into the common duct, called ductus communis choledochus, which receives it and conveys it into the first portion of the intestines. This is the second duct. But there is a third duct, which leads from the common duct into the gall-bladder. Through this duct the bile retreats from the common duct, and issues out again when it is needed; or when the gall-bladder becomes filled, it contracts, and emits it into the common duct.

The bile enters into the intestines about four or five inches below the stomach.

When the bile flows into the stomach, as it often does, it causes sickness and vomiting. When it is taken up into the system by the absorbent or secretory vessels, it gives to the skin and the

whites of the eyes a yellow color. It also stains the urine and the perspiration. Poured into the intestines, it assists in exciting a motion which carries down the alimentary contents. The bile gives to the fæces the yellow color. If the entrance of the bile into the bowels is stopped or impeded, the fæces become of a clay color, and the motion of the bowels is slow; more or less uneasiness is felt, and at length a serious disease is the consequence.

On the contrary, an excessive flow of bile into the bowels produces a rapid motion, or what is called a bilious diarrhœa. The bile is evidently of a purgative nature. Its deficiency causes costiveness, and its excess causes too quick a motion of the bowels, and finally disease.

The bile is composed of water, albumen, resin, a yellow coloring principle, soda, salts, and an acid called the choleic acid.

Liebig contends that the bile is the product of the metamorphosis of the flesh and tissues; and that its proper function is to support respiration and produce animal heat by presenting carbon and hydrogen in a very soluble form to the oxygen of the arterial blood.

When sweet oil is taken into the stomach and bowels, the bile combines with it and forms a kind of soap, which appears in numberless little balls. Mixed with water, bile is sometimes used instead of soap to wash woollen cloth.

When live animals are opened, and the mouth of the duct exposed which carries the bile into the bowels, the yellow fluid is seen to issue from it in drops. Vomiting has an extraordinary effect in the expulsion of the bile. In animals who have died in consequence of poisons, the gall-bladder is found empty. Hot weather appears to hasten the secretion of the bile, and cold weather to retard it.

BILIOUS FEVER—Remittent Fever.—This fever is not very common in the New England States, but in the Middle, and especially in the Southern and Western States, it is one of the most common and formidable diseases with which the inhabitants have to contend. Its nature, treatment, and symptoms were not formerly very well understood, but of late years, since the settlement of the south-western and western states, where it prevails more or less, annually, its history has been better ascertained, and the treatment of it more successful. In its symptoms it bears a considerable resemblance to the fever and ague. In the fever and ague there is a complete *intermission* in the paroxysms, once in twenty-four, forty-eight, or seventy-two hours, but in the bilious or remittent fever there is only a *remission* or abatement of the symptoms; the fever never entirely disappears until recovery takes place.

This fever commences with a sense of languor, anxiety, and an indisposition to motion, pain in the head and back, frequent flushes of cold and heat, but not with that degree of shaking and chattering of the teeth which ushers in an intermittent fever or fever and ague; there is thirst and difficulty of breathing, furred tongue and dejected spirits, sickness at the stomach and bilious vomiting. The

skin and eyes will often be tinged with yellow, which circumstance has led many physicians to think this kind of fever to be of the same nature with the yellow fever. The pulse will be frequent, hard, and small, though sometimes full and soft. These symptoms will continue a while, and an abatement will take place. A partial sweat will occur, the heat and thirst will be less violent, and all the symptoms will remit in a degree.

Delirium, in the beginning of this fever, shows the disease to be of the most violent kind. Dissections demonstrate that the stomach, head, and liver are often the seats of inflammation. In this country, an inflammation of these organs is almost always discoverable. It is a disease which always calls for a prompt, persevering and decided treatment. In the south and west it is a gigantic enemy to human life.

The causes of this disease, as of fevers in general, are hid in very deep obscurity. In low, level, wet, woody, marshy places, this fever prevails the most, and we think it more prevalent in clayey soils than in sandy; and the more southern the latitude, and the greater the degree of heat, the more frequent will be the occurrence and the more malignant the fever. Like the fever and ague, it is supposed to originate from some malign emanation from the earth, or from a decomposition of the vegetable, watery, and animal substances which cover it. This emanation is called malaria, or miasin. And surely the earth is as capable of originating a noxious matter, which shall penetrate and disorder the whole system, as is the human body itself. Several contagions originate in the human body itself, and much more may we expect the earth, with all its vegetable and animal substances upon it, acted upon by the continued heat of the sun, to foment and mature aerial poisons capable of diseasing the human body.

Domestic Remedies. — The first thing to be done, in a domestic way, is to relieve the stomach and bowels by a dose of physic. For this purpose, a tumbler full of strong thoroughwort tea should be given every two hours until it operates; the feet should be well bathed in hot water, and a tea-spoonful of the sweet spirits of nitre in a little water should be given every three hours until the fever abates. Emetics are not deemed very proper in this disease, unless there should be a bilious vomiting or a constant nausea. If, however, there should be much sickness at the stomach, a gentle emetic of ipecac. should be given before the administration of a cathartic. If there is much heat and pain in the head, an application of cold vinegar and water should be made to the head, and continued for some hours.

If the skin is hot and dry, and the weather is warm, cold water should be applied over the whole body, two or three times a day, until some abatement of the disease takes place. The water may either be thrown upon the body, or applied with a wet cloth or sponge. This remedy should never be forgotten or omitted. It abates the heat, relieves restlessness, and produces sleep. It is often more of an anodyne than opium itself. When no local in-

flammation is manifest, cold water may be drank as freely as it is used externally, and for the same reason.

Cold water, let us repeat it, that cold water is one of the best, safest, and most efficacious remedies in the treatment of bilious or remittent fever. It must not be forgotten, however, that its use should be omitted when any degree of chilliness or perspiration is present. Many a life has been saved by a proper, timely, and persevering use of this greatest, best gift to man.

If the patient is out of his head, or delirious, mustard poultices should be applied to the feet, and a large blister placed between the shoulders. The blister should, at least, be eight inches in length and six in breadth; one of a less size will seldom do any good. The nourishment should be nothing more than gruel and bread water, barley water, rice water, or some other liquid, vegetable substance; the drink, cold water, tamarind water, lemonade, soda powders, and Rochelle powders, which last will answer the purpose of cleansing the bowels and of abating the thirst and heat. Indeed, the Rochelle powders are a valuable modern discovery in the treatment of this and of all other kinds of fever. Cold water, saline effervescing draughts, leeches, instead of bleeding from the arm, and the discovery of the quinine, are great and inestimable improvements which modern physicians and chemists have made in the cure of fevers and of many other diseases. The sick of this disease should be excluded as much as possible from all noise and confusion. The light should be excluded, and the room kept cool, and often replenished with fresh air.

The bilious or remittent fever generally runs from five or six to fourteen days before symptoms of recovery take place. In the southern states its course is shorter, and the disease more violent than in the northern.

Professional Remedies. — In the early stage of the disease, blood-letting, either by leeching or from the arm, has been found of singular efficacy in relieving, shortening, and curing the fever. In the northern, and particularly in the middle states, one or two gentle bleedings have been found to be attended with the happiest effects. After bleeding and suitable evacuations of the stomach and bowels, an opiate may be resorted to, unless forbidden by the delirium and height of the fever.

Calomel, especially in the southern states, has been found of singular efficacy as a cathartic: it is given in doses of ten or twenty grains, and repeated as often as the quantity of bilious and feculent matter of the bowels appears to require it. It is sometimes used in combination with an equal weight of jalap or rhubarb. To open the pores of the skin and keep up a perspiration, antimonial medicines are used, and often prove peculiarly beneficial. Some of the profession rely upon them almost entirely. The surest and best way of using antimony, is either in solution, in the dose of a quarter of a grain of the tartrate, or in the form of James' powder, *pulvis antimonialis*. The James' powder is given in six grain doses, and repeated once in two or three hours. But these remedies, as good

as they are, cannot be given if nausea or vomiting prevail. The sal nitre is a medicine which many physicians prefer to antimonials. This salt acts more upon the kidneys than upon the skin, and relieves the fever by a flow of urine almost as much as antimonials do by exciting a sweat. The sweet spirits of nitre, when given in sufficient doses, and at frequent intervals, is also a remedy of much efficacy. In the dose of a tea-spoonful, administered every hour during the rage of the fever, it will work wonders. It is not a little remarkable how much a physician may accomplish by a single medicine, when he has become thoroughly acquainted with the use of it, and with all its effects and properties. We have sometimes thought it better for a physician to become acquainted with a single remedy than to have a partial acquaintance with many. We always prefer the use of simple preparations to the use of compounds. The virtues of a compound commonly depend upon the testimony of one or two physicians or individuals, whereas the properties of a simple are generally known, and their effects liable to less fallacy. In hot climates, where there is a distinct, periodical remission, which generally takes place in two or four days, the quinine is in very common use. This is given in one or two grain doses, every two or three hours, through the whole remission, and the nearer the fever approaches to a fever and ague, or intermittent fever, the more certain will the quinine be of curing the disease.

The stomach is always an organ to which the attention of the physician should be particularly directed. If the sickness and vomiting continue for any length of time, great prostration of the strength will be sure to follow; consequently every effort should be made to quiet and to restore this organ, at least to a comparative state of soundness. Leeching, undoubtedly, is the remedy of most power in the present state of our knowledge. A dozen or a dozen and a half of good leeches, applied, six at a time, to the pit of the stomach, will often be attended with the happiest relief. A large blister will sometimes be equally efficacious. Large warm poultices, made of poppy leaves boiled in water, are more innocent, and often excellent means of allaying the disturbance of the stomach. If the liver should discover signs of tenderness and inflammation, a similar treatment will be applicable to that organ. But in spite of all remedies, this disease will sometimes be so malignant, the delirium will be so great, the prostration of strength so sudden, and the affection of the whole system so deep, as to baffle the effects of all remedies, and the utmost skill. The only safety, when the disease becomes epidemic and malignant, is in flight from the infected district.

BISMUTH, OXIDE OF.—The bismuth, from which the oxide is made, is a white metal, very brittle, and easily melted. The oxide is made or formed by combining one part of bismuth with three parts of nitric acid, aqua fortis, diluted with an equal weight of water. After the acid has combined with the metal, a pure white powder is formed, which resembles the antimonial powder.

This powder is one of the very best remedies in the cure of dyspepsia and chronic affections of the stomach and bowels. The proper dose for an adult is five grains, twice a day. The dose for a child between six months and two years old is one grain a day. Upon what principle the oxide of bismuth operates, whether as a discutient of inflammation, or as a tonic, we are not prepared to say; but we have been convinced, from ample experience, of its efficacy in curing the dyspepsia. It can be made into pills with a crumb of bread, or taken in powder with a little syrup or molasses. The benefit derived from it, in our hands, has been the most unequivocal.

BITTERS.—Bitters may be prepared, either by steeping them in water, by dissolving them in new rum, brandy, or alcohol, or they may be taken in the form of a pill. It was the old fashion to take bitters in rum, brandy, or wine; but this is not at all necessary, to secure the full effect of the bitters. Water will extract the virtues of most bitter substances as well as spirituous liquors. Most bitter substances furnish an extract, which may as well be taken in the form of a pill as in any other way. The advantage of dissolving bitters in spirits consists principally in the disposition of spirituous solutions to keep for a long time. The best bitters are quinine, Peruvian bark, colombo, gentian, quassia, cascarilla bark, camomile flowers, the inner bark of the wild cherry tree, and wormwood.

BITTER SWEET—*Solanum Dulcamara*.—This plant is found in moist, sheltered situations, where its roots can have a free supply of water. Its stalks are woody and brittle, climbing upon fences and bushes, or running upon the ground. The berries are oval, of a bright scarlet color, and continue to hang in bunches after the leaves have fallen in autumn. The twigs and roots have both a bitter and a sweet taste, as the name of the plant imports. A tea made of the twigs, or roots, is the common way of using it. A wine-glassful of the tea is a full dose to begin with, but the dose may gradually be increased. It is both an emetic and narcotic. Its greatest celebrity consists in the cure of diseases of the skin, especially a scaly, dry humor, called the leprosy. It is taken three times a day, and the skin is at the same time washed with it.

The bark of the root, simmered with fresh butter and cream, makes a very healing ointment for sore nipples. In the cure of tetter and syphilitic diseases, it holds a high rank. In a large dose, it produces convulsions, delirium, and insensibility.

BLACKBERRY.—The low or running blackberry is the species commonly used in medicine. The roots are the most medicinal. The blackberry is an active astringent, and may be given in looseness of the bowels, and all other complaints where astringents are required. In dysentery, diarrhoea, and the bowel complaint of children, it will often effect a perfect cure. The dose for a grown person, is a tea-cupful of the strong tea made by steeping the root. The dose for a child, of the same tea, is a table-spoon-

ful, several times a day. It makes a very suitable drink for a person affected with the diabetes, or excessive flow of the urine. It makes, also, a good gargle for sore mouth, both of children and grown people. The blackberry jam, made from the berries, has been used for the gravel. Mixed with water, it makes a very agreeable and suitable drink in dysentery and diarrhœa. The jam itself may be taken as nourishment. The blackberry tea, drank frequently in the course of the day, and followed for several days in succession, will restrain the most obstinate looseness.

BLACK DROP.—The black drop is made by adding four ounces of pure opium to a pint of sharp vinegar or lemon-juice. The solution must be allowed to stand three weeks, and then must be added saffron, cloves, nutmegs, cinnamon, of each an ounce, coarsely powdered. The whole must be allowed to stand a week longer, strained through a flannel, and the liquor evaporated to the consistence of syrup. The black drop has all the effect of laudanum, without the headache, giddiness, and nausea, which often attend it. Where the laudanum and morphia do not agree with a person, the black drop should be tried. Since the discovery of the denarcotized opium, and of morphine, the black drop has been much less used. The proper dose of the black drop is twelve drops. The dose for a child two years old, two drops.

BLADDER.—The bladder is situated in the pelvis or basin, and in front of the lower portion of the bowels, which is called the rectum. The bladder, when taken out of the body, is nearly transparent, and capable of being blown up, or distended with air, to a very great size. In the living body, it is capable of great distention, but is less extensible than after death. The urine is received into the bladder by means of two ducts, leading from the kidneys, called ureters. The external coat of the bladder is strong and fibrous. The internal coat is drawn into a multiplicity of wrinkles, which makes it thick and shaggy. The inner coat secretes a mucus, which defends it from the corrosiveness of the urine. The ureters enter the back part of the bladder obliquely. The urine is retained in the bladder by means of a circular muscle, called the sphincter, which contracts until the bladder becomes so filled as to render its longer retention painful. The pain relaxes the sphincter, and the urine issues through the duct, called the urethra, and finds a passage out.

The bladder is attached to the rectum, to the hip-bones, to the peritoneum, and to the navel, by means of ligamentous fibres. When the bladder is full, it rises above the pelvis, and can be felt in the lower part of the belly. In females, the bladder is separated from the rectum by the uterus, or, in other words, the uterus, or womb, is situated between the bladder and the rectum.

This organ appears to be a mere receptacle of the urine. For what purpose the urine is retained in this receptacle, it is difficult to discern. If, however, the urine had no such reservoir, it must be constantly dribbling away, and produce great inconvenience.

BLEEDING, OR VENESECTION.—In letting blood, which is commonly performed in the arm, it is best to select a vein which rolls the least under the skin. If there is a beating felt in the vein, or perceived by the eye, it should not be selected, if it can be avoided, because the beating shows that there is an artery situated under it, which would be in danger of being pricked. The veins do not beat, of themselves, but the beating is communicated to them by some adjoining artery.

The veins which lie nearest the surface are not always the best to open.

The first thing to be done is to tie a fillet or bandage with moderate tightness round the arm, a little above the elbow. The object of this is to stop the blood from flowing through the veins upon the surface, without impeding the blood in the artery, otherwise the veins could not be rendered turgid.

The operator should have a sharp lancet, entirely free from rust. He must fix the vein, as much as he can, by placing the thumb of his left hand a little below the place where he intends to introduce the lancet. More depends upon the manner of using this instrument than upon its shape. It should be pushed into the vein in an oblique direction, and, when its point is a little within the cavity of the vessel, it is not to be pushed further, but to be brought obliquely upward and forward, until the point is brought out again. More is learned by seeing a good operator perform venesection once, than by a thousand descriptions of it.

The patient should hold his arm out straight, and support it by taking hold of a stick. In order to make the blood flow more freely, the fingers and the muscles of the arm should be kept in motion by opening and shutting the hand. If the opening in the vein becomes blocked up by the coagulation of the blood, a snap with the finger will set the blood to running. In cases of rupture, or strangulated herniæ, and dislocations of the joints, a free opening should be made, in order that the blood may flow fast.

After a due quantity of blood has been drawn, the fillet is to be loosened and removed. If the stream of blood does not cease by the removal of the ligature, the thumb of the left hand should be pressed upon the vein below the orifice, which will stop it effectually. The arm should then be washed, and a pledget of lint, or a roll of old cotton or linen cloth, placed upon the orifice, the lips of the incision brought closely together, and secured by a bandage.

If the arm gets to bleeding, it can always be stopped by pressing upon the vein below the orifice, or upon the orifice itself. In this condition it can be held by the person himself, until assistance can be procured.

BLEEDING FROM THE BLADDER AND KIDNEYS—Hematuria.—Voiding of blood from the urinary organs is not a common disease, unless the bladder and kidneys are irritated by the presence of gravel-stones. It may happen from blows upon the abdomen and back, and from violent exercise by riding or jumping.

We believe, however, against the opinion of Dr. Cullen, that it does happen without the aid of any mechanical violence, either of gravel-stones, or accidental blows, or overstrained exercise. We have known it to be voided without pain or distress of any kind. The urine is sometimes so high-colored, or of such a deep red, as to be mistaken for blood; but if a piece of linen cloth be wetted with the doubtful discharge, the fact may be easily ascertained. If the urine is bloody, a stain will be left upon the cloth; if it is only highly colored, no bloody deposit will remain. Another criterion of blood in the urine is its coagulating by the heat of boiling water, whereas the urine, when it is free of blood, does not coagulate by that degree of heat.

When the voiding of blood arises from small gravel-stones lodged in the ureters, the blood is apt to be somewhat coagulated, and the sediment of the urine will be dark brown, or coffee-colored.

In cases of bloody urine, there is commonly acute, excruciating pain in the small of the back; great difficulty in making water; sometimes great sickness at the stomach, and vomiting. If the blood comes only from the bladder, there will be a sense of heat and pain at the lower part of the abdomen, and in the neighborhood of the rectum. This complaint is always attended with some danger, particularly if purulent matter is discharged at the same time.

Domestic Remedies.—We believe the best remedy which can be administered, in bleeding from the urinary organs, is a dose of laudanum. There is usually great distress and pain in passing the water, which we have never seen relieved until an opiate had been given. An adult should take from forty to sixty drops of laudanum, or a table-spoonful of paregoric. After the violence of the disease has been allayed by an opiate, either a warm bath should be taken, or cloths wet with hot water or new rum should be applied to the part. Warm flax-seed tea should be given for drink, and an injection of Epsom salts, dissolved in warm water, immediately administered. The salts of nitre, in eight grain doses, or the sweet spirits of nitre, ought to be given every two hours. The uva ursi is an excellent diuretic in such cases. A tea should be made of it, and drank every half hour. Mullein tea, drank plentifully, will often obviate the difficulty of passing the urine. Mucilaginous drinks should be constantly given, and a liquid diet adhered to. A tea made of peach-leaves, and drank at the rate of a pint a day, succeeded, in one case, where many other medicines had failed.

Professional Remedies.—If the force of the pulse should be above the natural standard, blood should be drawn, either by leeches upon the back or lower part of the abdomen, or from the arm. If the stomach is disturbed, that organ should be quieted by an anodyne, and the bowels moved, either by a Rochelle powder, calcined magnesia, or a pill of aloes. The spirits of turpentine will sometimes obviate the obstructions in the urinary passages. Where

the discharge of blood proceeds from the gravel entirely, it cannot be cured until the disease is removed.

BLEEDING FROM THE BOWELS.—A discharge of blood from the bowels is quite a common occurrence, even where there are no signs of dysentery, or of the bleeding piles. It often takes place without much, if any, pain at all. The blood voided by the rectum will, sometimes, be fresh, and, at others, coagulated, dark, and decomposed. Intemperate people are peculiarly subject to this complaint. Some portion of the bowels, no doubt, becomes excessively irritated by the force of the constant stimulation, and blood is poured forth into the common canal. In the dysentery, the discharges are mixed with mucus and hardened fæces, and are attended with griping and pain; but in pure hemorrhage, the blood is scarcely mixed with the contents of the bowels, and comes away without pain. In voiding blood from the bowels, there is usually a great loss of strength, fainting, and paleness of the skin. It sometimes comes on gradually, or by discharging small quantities at a time, and at others, very suddenly, and by voiding large quantities.

Domestic Remedies.—The patient should be placed in bed, and kept perfectly quiet. An injection of alum-water, mixed with a tea-spoonful of laudanum, should be given, and a dose of castor-oil swallowed immediately after it. Lemonade or cold water should be given for drink; and gruel, toast-water, and barley-water for diet. The room ought to be kept cool and well aired.

Professional Remedies.—Drawing blood from a vein, or by leeches, in this disease, is scarcely allowable, if ever required. The practice must consist mainly in the use of astringents, styptics, and refrigerents. Opium, in some form, will be found the most effectual of anything. After an opiate has been given, some gentle cathartic will be necessary, to free the bowels of any offending matter which may possibly occasion the hemorrhage. But after the bowels have once been emptied, they should not be again disturbed, until a trial has been made of astringent and styptic medicines. The creosote will probably be the most appropriate and efficacious. The tannic acid, sugar of lead, and the sulphate of zinc, can also be used. Soda water, and the acetate of ammonia, should be given, in a state of effervescence. Powdered charcoal has sometimes been given with success. In one case, which came under our notice, small doses of ipecac., given every two hours, were followed by a gradual abatement of the disease, and, finally, by an entire cure. With the exception of blood-letting, the remedies recommended for hemorrhages in general will be proper in hemorrhage of the bowels.

BLEEDING FROM THE LUNGS OR LIGHTS—Hæmoptysis.—Spitting of blood is one of the most alarming incidents to which we are liable. It very often occurs without any warning, and proceeds from no assignable cause. A slight tickling in the throat, a little cough, probably produced by the blood let loose in the air-cells of the lungs, and a slightly saltish taste in the

mouth, are all the inconvenience commonly felt in spitting blood. In some cases there will be feverishness, headache, quick pulse, alternate sensations of heat and cold, a sensible tightness in the chest, wakefulness, and a degree of restlessness, flushings of the neck and face, and thirst. Sometimes the blood will be spit up in small quantities, and at other times in large mouthfuls. It is of a light-red color, and usually frothy. The blood which comes from the stomach is always of a dark color, and comes up by *vomiting*. The blood which comes from the lungs is always of a light-red color, and comes up by *coughing*. It will be observed, therefore, that the coughing of blood, and the vomiting of blood, are two very different disorders, both as respects the organs from which the blood proceeds, and the degree of danger to which the patient is exposed. When the blood comes up into the mouth by vomiting, but very little or no danger is to be apprehended; but when it comes up by coughing, the case is much more serious and doubtful.

In bleeding from the lungs, the degree of danger is, by no means, in proportion to the quantity of blood which is coughed up at a time. Recovery takes place quite as well and as often, where large quantities of blood have been raised, as where they have been small. People are most liable to spit blood about the age of puberty, or between puberty and thirty-five years of age; and females are more liable to it than males. The system about the age of puberty is peculiarly excitable; the blood-vessels have not yet acquired their full degree of cohesiveness or strength, and the force of the circulation is at that age suddenly increased. Blood is sometimes discharged from the mouth, back part of the nose and the throat, and is liable to be confounded with raising it from the lungs. When it comes from the mouth merely, there is no coughing or vomiting, and when it comes from the upper part of the throat and the posterior nares, it is brought out by mere hawking, and if the throat is examined, blood may be seen issuing from the capillary vessels.

Nothing is more remarkable, in this complaint, than that one person is much more prone to it than another. Although, in this respect, it is like some other disorders and derangements of the human system, it has been remarked, in all ages, to attack those whose respiratory organs are not so fully developed as the other organs of the body. People of a sanguine, sensitive, excitable temperament, are oftener the subjects than any others. In some cases of bleeding from the lungs, recovery readily takes place, and, in others, the complaint proceeds on to ulceration and suppuration, and ends in consumption.

Domestic Remedies. — In the act of spitting blood, the patient should be placed in an easy-chair, or on a bed, with the head and shoulders raised, as blood cannot so easily issue from the vessels of the lungs in this position as when he lies down. He should be directed not to speak loud, or to use exertion of any kind. He should be allowed free air, and only a light covering. A dose of Epsom salts should be immediately given, or, in case this article is

not at hand, a tea-spoonful of common table salt should be given. The efficacy of common salt has been questioned, but as it produces nausea and a sense of cold in the stomach, it is, at least, as good as nauseating medicines in general. We have seen bleeding from the lungs stopped immediately by administering a strong injection of the Epsom salts dissolved in simple warm water. We believe it to be the most effectual remedy which can be administered. The course of the blood is changed much quicker in this way than any other which we can adopt. We have seen a saline injection succeed in stopping the hemorrhage ten or twelve times in succession. Eight grains of nitre or saltpetre, in solution, should be given every two hours; or two grains of ipecac., once in the same time, will answer a similar purpose. A gentle nausea moderates the force of the circulation, and tends to check the flow of the blood. Sour drinks, such as lemonade, barberry-water, and tamarind-water, cool the blood, and obviate the tendency to febrile excitement. Cold water can be freely drank to allay the thirst. A light vegetable diet should be strictly adhered to until all appearances of bleeding have ceased. The bleeding will often return every day, or every few days, for several weeks in succession. It commonly increases until it reaches a certain point, and then gradually decreases until a sound state of the lungs is regained.

Professional Remedies. — Where the force of the circulation appears to be greater than natural, which must be judged of by the pulse, color, &c., blood should be taken from the arm. But, in the artificial abstraction of blood, it should not be forgotten that a great loss of blood, in any way, produces a degree of vital debility which prevents instead of hastening the healing of the diseased portion of the lungs. Alum, sugar of lead, sulphate of zinc, and other astringents, will occasionally be found effectual. Blisters should be applied to the chest, and some saline cathartic should be administered every day. A solution of tartar emetic, in small doses, should be repeated as often as the force of the circulation appears to require it. Blood drawn from the chest by leeches, or cupping, is often preferable to the abstraction of it by opening a vein. A cloth wet with the spirits of turpentine and allowed to evaporate upon the chest, so as to inhale the vapor, has been highly recommended. In obstinate cases, the solution of creosote, in five or six drop doses, is said to have been successful. In one trial which we made, it succeeded after many other means had been used. The digitalis has become a popular remedy in hemorrhage from the lungs. It has great power in weakening the force of the pulse, but it has always appeared to us to weaken the vital or healing power of the system in a similar proportion, and, on this account, to be a doubtful medicine. The greatest benefit may be expected from quietude of body and mind, and a long persistence in a vegetable diet and strict temperance. Riding on horseback has been sometimes erroneously recommended by physicians who confound hemorrhage from the lungs with actual consumption, than which

there can be no greater error. We knew an alarming hemorrhage from the lungs to have been produced in a young lady by riding on horseback, and finally to have ended in a consumption. In all cases of hemorrhage from the lungs, whether the bleeding proceeds from tubercles and ulceration, or from simple exhalation of the blood-vessels, riding on horseback is an improper and dangerous experiment. In all the kinds of consumption which are not attended with bleeding, the horseback exercise may be proper and salutary, but in cases of spitting blood, it is only adding to the occasion, instead of effecting the cure, of hemoptysis. All exercise of the mind and of the body should be of the gentlest kind, such as riding in an easy carriage, sailing, and moderate walking. The causes most likely to produce bleeding from the lungs are, great heat and violent exertions of the strength. More instances of hemoptysis occur in the spring of the year and summer than in autumn and winter. A waistcoat made of wash-leather, and worn next the skin, or over the shirt, has been found an excellent expedient to resist the changes of the atmosphere. We have heard of more cures in consequence of wearing the leather shirt, or waistcoat, than from all other means put together. The hydrocyanic, or prussic acid, has lately been recommended in hemorrhage from the lungs. In one case of bleeding from the lungs, which had occurred several times and continued for three or four weeks at a time, we prescribed the leather waistcoat and stockings, and an entire vegetable diet, with the exception of salt fish. Both prescriptions were followed strictly for two years, when the patient was entirely cured, and has ever since continued well, a period of eight or nine years. He lived principally on hominy and molasses, and salt fish. He eat other vegetables, such as potatoes, beans, peas, asparagus, brown and coarse wheat bread, but his living was almost entirely the articles we have named.

We think that bleeding from the lungs is a more frequent complaint in New England and the Northern States, generally, than in any other part of the world. From the notice which the English and the other European writers have taken of it, it does not appear to hold that important place among European diseases which the frequency of its occurrence and the nature of its symptoms assign to it among us. We meet with few diseases which demand more attention and study than hemoptysis, and perhaps there are none which are more within the reach of remedial agents.

BLEEDING FROM THE NOSE—*Epistaxis*. — Bleeding at the nose is in general attended with but very little danger. It is often a relief to the headache and the fulness of the blood-vessels of the brain. Where the bleeding is moderate, and does not often occur, no remedies are required. Children and young people are principally the subjects of it; but all ages, of a sanguine temperament and of a full habit, are occasionally liable to it. It most commonly occurs about the age of puberty, when the force of the circulation has become strong, and before the blood-vessels have

acquired that cohesiveness or toughness which enables them to resist the force of the moving blood. The blood-vessels of the lining of the nostrils are the tenderest and the most frangible of any in the whole body. A mere picking of the nostrils, or pushing the finger into them, will let loose a quantity of blood.

Bleeding at the nose is generally preceded with something of a feverish state. There will be a dizziness or swimming of the head, a flushed countenance, and a sense of tightness across the bridge of the nose, headache, and a rushing of blood to the head. Where bleeding from the nose becomes periodical and profuse, it produces an habitual paleness of the skin, weakness of the system, and a disposition to dropsy. In such cases, immediate means should be used to check and to cure the disease. In slight cases, it is only necessary to apply cold water, or to snuff up a little alum water or the fine powder of alum, or tannic acid. A plug of dry linen lint will sometimes stop the blood where cold water and alum fail. The person should avoid the fire and keep still until the hemorrhage has ceased. Raising the arms above the head, and keeping them in that position for ten or fifteen minutes, has been lately recommended by a French physician, M. Negrier, as a very sure expedient in arresting the bleeding. Whether it will generally succeed or not, we are unable to say, but it is one of the most philosophical agencies which has ever been employed in the art of medicine. By raising the arms, the heart is obliged to labor so much the harder to propel the blood to the head, and, of course, the blood in the arteries leading to the head and nose will be moved so much the slower.

In young, full-blooded people, bleeding at the arm has been found to succeed in curing the hemorrhage. Cooling medicines, such as the Rochelle powders, Epsom salts, and the mineral acids, are in general use in this complaint. In addition to alum, the white vitriol and sugar of lead are very effectual when dissolved in cold water and snuffed up the nostrils. The worst case which we ever saw, and which had continued for twelve hours, in spite of several common expedients which had been used, was stopped effectually by snuffing lead-water for only a few moments. The *creosote* has lately been much used and highly recommended as a styptic. In bleedings from the lungs, the *creosote* has been administered internally, and with much apparent success. But the blood sometimes rushes so forcibly from the nose as to require strong compression. This is done by winding a piece of linen cloth around a probe, and crowding it up the nostril until it completely fills and presses the sides of the nostril. It must often be pushed clear through into the back part of the nostril. In aggravated cases, a light vegetable diet should be adopted; all violent exercise, and all stimulating food and drink, studiously avoided; and febrifuge medicines used. In cases of debility, iron, in the form of muriate, or in some other way, should be given, to strengthen the system and to repair the lost tone of the digestive organs.

BLEEDING FROM THE STOMACH — Hematemesis. —

Vomiting of blood is much more common among women than among men. It commences with pain and distress in the pit of the stomach, sickness, restlessness, and weakness. It is sometimes called spasms in the stomach; it is probably better known by this name than any other, especially among females. There is a sense of extreme fulness of the stomach, and a dying sickishness, which are somewhat relieved by vomiting, but return again every hour or two. The patient is pale and restless; often wringing and twisting the hands and throwing about the feet. There is almost a constant nausea and retching. After throwing up more or less of blood, sometimes quite clear, and at others mixed with the ordinary contents of the stomach, there will be a short respite; but the spasms and vomiting soon return, and continue until the strength is apparently exhausted, when the spasms remit, and the vomiting abates again. These appearances, unless checked by proper remedies, will often continue for several days and nights. But they are always more alarming than dangerous. Death will sometimes ensue from vomiting of blood, though not often. Medical writers have assigned a great many reasons for bleeding at the stomach, but none appear to be entitled to any great weight. Most probably the stomach is in a similar state to the lungs and the lining of the nose when bleeding takes place from those organs. There appears to be a violent local irritation, which continues for a certain length of time, and then subsides. A sudden suppression of the menstrual discharge is supposed to occasion this affection of the stomach. A cessation of other discharges is also enumerated among the causes which produce a vomiting of blood. These causes may have an effect in deranging the exhalent vessels of the stomach; but as the bowels, lungs, kidneys, bladder, nose, and uterus, are all subject to hemorrhage, we may rationally conclude, that, for the most part, it is a peculiar derangement of the stomach, primarily. A derangement of the stomach is much more likely to affect the other organs of the body than a derangement of the other organs to affect the stomach. In examinations of the stomach after death, if the disease have been short and violent, no trace of ruptured blood-vessels is to be found; but in other cases the lining of the stomach has been found black and its vessels distended with blood. A rupture of the blood-vessels has seldom been found in any case. The spleen has occasionally been found much distended with blood.

An exposure to cold, which stops the perspiration, and getting the feet wet, are the most common causes which bring on an attack of hematemesis. Violent passions, corrosive substances taken into the stomach, and blows about the region of the stomach, will bring on a bleeding from that organ. This affection of the stomach will continue from twenty-four hours to eight or nine days. It appears to increase for a day or two, and then gradually to decline; the vomiting becoming less severe, and the spasms less painful and frequent, until the whole affection ceases.

Domestic Remedies.—Where bleeding from the stomach pro-

ceeds from corrosive substances swallowed, the first thing to be done is to remove or neutralize them by emetics and oils. In such cases an emetic of ipecac. will always be safe, and if the ipecac. should not be at hand, a table-spoonful of powdered alum will be equally proper. After the operation of the emetic, a dose of castor-oil will be necessary to operate downwards, to clear the bowels. Cold water and sour drinks will be proper; and also bathing the feet in warm water. Mustard poultices should be applied to the feet, and, in severe cases, to the stomach.

But where the spasmodic pains are severe and the vomiting of blood frequent, the remedy which will be found to succeed the oftenest is a tea-spoonful of laudanum and a tea-spoonful of ether mixed together and swallowed in a little water. If the first dose does not allay the vomiting of blood and the spasms, it may be repeated at the end of one hour; and if the second dose does not succeed, it may be repeated the third time, at the end of three hours more. In moderate cases, a couple of tea-spoonfuls of laudanum may be laid upon the stomach by wetting a piece of flannel with it.

The diet should be nothing more than barley-water, gruel, or toast-water. Soda-water, and the Rochelle powders, in small doses, will have a tendency both to stop the bleeding and allay the irritation which occasions it. In bleeding from the stomach there is seldom any fever. The blood which is brought up is either clotted or very dark-colored. It will, sometimes, however, look quite new, and we believe, where it is preceded by spasms, generally fresh.

Professional Remedies.—If, in this affection of the stomach, the force of the pulse is more than natural, and the distress considerable, blood may be taken from the arm, or, which may be more proper, by eight or ten leeches applied over the part affected. Astringent medicines should be tried, such as the tincture of the muriate of iron, creosote in doses of three or four drops, diluted with alcohol and water, alum, sugar of lead, or the tincture of galls. Saline cathartics and anodynes will be found of signal benefit. Where there is great loss of strength, it will be necessary to make use of injections. The diet should be liquid, and the drinks mucilaginous. All heating, stimulating medicines should be studiously avoided. After the vomiting of blood has ceased, if the strength has been much impaired by it, tonic medicines will be very proper, such as quinine, colombo, and tincture of muriate of iron. Those who are subject to this affection should be exceedingly cautious of wet feet, and every species of intemperance. The intemperate are especially liable to it. Most of the cases among males proceed from this cause alone. A temperate diet, dry feet, gentle but free exercise in the open air, open bowels, and a flannel waistcoat worn next to the skin, will generally lessen, where the regimen does not entirely cure, the disease.

BLEEDING FROM THE WOMB—Menorrhagia.—Bleeding from the womb may proceed from a great number of causes,

each of which would require a particular mode of treatment. Among the causes producing this affection, may be mentioned child-birth, miscarriages, accidents, and diseases incident to pregnancy; cancer, polypus, cauliflower excrescence, and ulcerations of the womb; all of which will be noticed under their respective heads. In the present article, that kind of bleeding only which may be considered as an excessive flow of the monthly discharge, or menses, will be treated of. Excessive discharges of the menses may occur in various ways; they may return too frequently, or too copiously, amounting to an absolute bleeding, in which clots will form as in bleedings from other causes; or they may come on at unusual periods, as during pregnancy and suckling. In estimating the quantity discharged, we must take into consideration the constitution of the patient, and the climate; what would be natural menstruation in one individual would be profuse in another; and so, in regard to climate, what would be profuse in a cold climate would be only natural in a warm one.

There appear to be three distinct forms under which this affection manifests itself, each of which has its acute and its chronic characters. In the first form, the discharge is of the natural quality, but the quantity or the frequency of the recurrence is greatly increased. In the second, the discharge is more considerable, and mixed with clots of blood. In the third, the loss of blood is sometimes very great, and attended with marked changes in the size and position of the womb,—a circumstance not observed in the two former varieties.

The first variety usually sets in with a sudden gush of blood from the womb, after which it stops for a few hours, and then perhaps recurs, and this alternation may go on for a number of days. Sometimes, however, the discharge is regular in its return, but lasts twice or thrice the usual length of time. In other cases, it is not extraordinary at one time, but returns every two or three weeks, instead of the ordinary period of four. This form of the disease is often met with in young and even unmarried women, and is generally accompanied with leucorrhœa, or whites, during the intervals.

The second form of the disease differs from the first in the greater amount of blood discharged in a given time, and in the formation of clots, which are mixed with the natural secretions. It is usually met with in women of a leucophlegmatic temperament, and those whose constitutions have been impaired by disease, or frequent child-bearing. Women who are under thirty years of age, though occasionally the subjects of it, are not as liable to it as those between thirty and forty. The disorder comes on gradually, one or two small clots appearing at first, perhaps scarcely noticed by the patient, and then there may be an intermission, and then a recurrence in an aggravated quantity. After continuing on in this way for some time, the loss of blood often becomes so great as to produce extreme exhaustion and even fainting.

The third form in which this disorder shows itself, and which is

much the most severe, is usually observed in women who are from forty to fifty, and in whom the menses are about to cease. All the symptoms in this variety, both general and local, are much more grave than in the two former; the womb is more or less disordered in its structure and position, and the case is infinitely more difficult. No kind of constitution is exempt from it. It may attack the plethoric or debilitated, the melancholic or the sanguine. Some degree of irregularity of the menses, either in time, quantity, or duration, and leucorrhœa during the intervals, generally precede the attack. Ordinarily, the natural evacuation appears first, and continues about twenty-four hours before the clots of blood begin to be expelled. The quantity of blood lost is sometimes very great, producing extreme exhaustion, and causing serious apprehensions as to the result. The first attacks of flowing, in this manner, last from seven to ten days only, but where the disease is of long standing, they may continue two or three weeks, or even a month, almost without any intermission. There is generally difficulty in voiding the urine, the bowels are costive, the appetite depraved, the surface of the body is blanched, and the general health suffers severely. A relapse of the disease, after an apparent recovery, is not unusual.

The principal causes assigned for this variety are the peculiar changes which take place in the system about the period at which it makes its appearance, and the condition giving rise to it is thought to be a congestion or over-fulness of the blood-vessels of the womb.

The general, or constitutional symptoms, which are similar in all the forms, are, languor, exhaustion, weakness across the hips and loins, a dislike of exertion, paleness of the countenance, headache, throbbing in the temples, ringing in the ears, giddiness, and, in some instances, feverishness, irritability, and a deranged state of the stomach and bowels. In the more aggravated cases there is often an aching pain in the side, extending round the lower part of the abdomen, the headache is intense, there is melancholy and other nervous symptoms, swelling of the feet and legs, diarrhœa, faintness, and a deathlike countenance. The blood in this disease is altered and attenuated, and this attenuation predisposes to still further losses. Among the causes producing an excessive flow of blood from the womb, may be enumerated, over-heated rooms, too warm clothing, sleeping upon feather-beds, warm bathing in excess, excessive indulgences, frequent child-bearing, over-nursing, cold, over-exertion, and violent mental emotions.

As regards the danger to life, the prognosis in these affections is favorable, as most cases, by proper management, are curable. Sterility, and a predisposition to abort, are occasional, though not very frequent, consequences; but a relaxation of the passage, and a falling of the womb, or prolapsus, are not unfrequently induced.

In attempting to cure menorrhagia, the first step to be taken is, if possible, to remove the cause, as, except this be done, success

cannot be expected to attend our efforts, however well directed. During the continuance of the discharge, especially if excessive, the patient should be kept perfectly quiet, and as much as possible in a horizontal position, on a cool, hard bed or mattress. The clothes should be light and loose; the drink should be cool, and acidulated with lemon, elixir vitriol, cream of tartar, or tamarinds. An infusion of cinnamon, and other spices, is among the most popular remedies, and in debilitated habits, its use may be attended with benefit; but perhaps there is no domestic remedy better adapted to these cases than alum whey. It is made by dissolving a quarter of an ounce of alum in a pint of warm milk, and it may be taken with great freedom. A decoction of logwood is also a medicine of much value in these cases. In sudden and severe attacks, cold spirits, vinegar, or water, should be freely applied to the lower part of the abdomen and genitals, by means of cotton or linen cloths, which should be changed as often as they become warm, until the discharge is checked. Should these means fail, and the woman have been married or had children, a strong solution of alum or tannin, in water, or decoction of oak bark, should be injected into the passage, and repeated often if necessary; or, what will be quite as effectual, these, or some other astringents, may be applied by means of a wad of cotton, sponge, or old linen, inserted into the vagina in sufficient bulk to prevent the escape of blood. When this remedy is used, it may be allowed to remain twelve or twenty-four hours, or until the discharge cease, and the woman revive from the faintness. A lump of alum, applied in the same manner near the mouth of the womb, will also sometimes have the happiest effects. These substances can be readily withdrawn, and their use is not attended with the least danger. The patient's strength should be supported with a light but nutritious diet, and during the intervals, a moderate use of good port will be allowable. A wine-glassful of camomile tea, with ten drops of elixir vitriol, or tincture of iron, three times a day, is a valuable tonic, and will contribute to a permanent cure. Riding in a carriage, sailing, sea air, and sea-bathing, if these are attainable, and sponging the loins and lower part of the body with a strong solution of salt in brandy, vinegar, or water, will be found valuable auxiliaries.

Physicians, in adapting their remedies to this disease, recognize two different and somewhat opposite conditions under which it manifests itself:—that of a surcharged or congested state of the blood-vessels, especially of the womb, attended with more or less excitement of the arterial system and other febrile symptoms; and that of debility and relaxation, accompanied with a feeble circulation, and an attenuated state of the blood, allowing it to flow more readily through the mouths of the vessels opening into the cavity of the womb. In the former of these conditions, repeated small bleedings, practised just before the expected return of the menses, leeching, cupping, and blistering about the loins, injections of cold water, and a cooling or antiphlogistic regimen, are sometimes of the most essential service. When tonics are used during

the intervals,—the time when the most permanent benefit is to be expected from remedies,—they should be those that are the least stimulating, and be combined with sedatives. The precipitated carbonate, the sulphate, and the phosphate of iron are often given in these cases, either alone or in combination with aloes and myrrh, or with soda, as in the Griffith's mixture, and may occasionally be beneficial; but the sulphates of zinc and copper, (white and blue vitriol,) elixir vitriol, and other mineral acids, are to be preferred. A pill, composed of equal parts of white vitriol, rhubarb, and extract of cicuta, from a grain to a grain and a half of each, is well adapted to this form of the disease; one pill to be taken three or four times a day. The following solution is also often given with marked advantage: blue vitriol six grains; laudanum and elixir vitriol each two drachms, or one hundred and twenty drops; water an ounce and a half; dose from thirty to fifty drops, or what the stomach will bear, without producing sickness, three times a day. This is also a good styptic, given during the discharge, and at such times it may be increased until it produce nausea. In the latter condition of the system referred to, that of unequivocal debility, although it may occasionally be necessary to obviate local congestion by dry cupping, blistering, a gentle cathartic, or a few leeches upon the loins or lower part of the back or bowels, the general treatment must be decidedly strengthening. The preparations of iron, Peruvian bark, quinine, port wine, and in those cases where there is much pain, opium, hyoscyamus, and cicuta, are among the most appropriate remedies. Should there be troublesome nervous symptoms, the milk of lettuce, (lactucarium,) valerian, or Hoffman's anodyne, may be given according to circumstances. In severe attacks, during the continuance of the discharge, in addition to the means heretofore mentioned, the remedy most in repute among physicians is opium and sugar of lead, from one to two grains of the former to from two to five grains of the latter, made into a pill, one of which is given every three or four hours, as the case may require. The ergot,—spurred rye,—which has the specific action of contracting the womb, is admirably adapted to these cases. It is commended by the highest authority, and we have frequently used it with great success. One drachm should be steeped in a gill of boiling water, and a table-spoonful given every half hour, in dangerous cases, and every three or four hours in those that are less severe, as long as the urgency of the symptoms demands.

BLEEDING PILES.—See *Piles*.

BLISTERS.—Much prejudice has of late years been excited in the minds of many people against the use of blisters. But there is no remedy productive of less mischief and more benefit, in certain cases, than a well-applied blister. There is nothing better settled in the science of astronomy, chemistry, and natural philosophy, than that a blister of suitable dimensions will relieve pain, and lessen soreness, swelling, and inflammation. A blister will not cure all diseases; and may, in many cases, be productive of

little or no benefit. But when a blister is skilfully used, or rightly adapted to the nature and magnitude of the disease, it operates with as much certainty in producing relief as any medicine which has ever been used. The indiscriminate and methodical use of blisters has probably led people to doubt their utility; but they have certain remedial properties, ascertained by experiment and observation, and, however prejudice or fashion may operate against them for a season, they will finally vindicate themselves and resume their proper place among the materials of medicine.

If blisters are applied to the body in a state of high fever, when the whole skin is parched, the pulse quick and elastic, and all the secretions dried up, they seldom prove beneficial, and, sometimes, aggravate the disease. It is not until the vehemence of the fever is over, and the heat and acuteness of the disease somewhat abated, that blisters are demanded or prove serviceable. It has been customary to apply blisters in all inflammatory affections with as much uniformity as to practise blood-letting or to prescribe sudorifics. This only shows a want of discrimination. It is not supposable that they will effect a cure in all cases.

We believe that blisters are adapted to the cure of diseases of a certain extent and degree of severity. If we attempt to cure inflammations, or disorders of greater magnitude, with them, we shall be liable to fail. In a mere pleurisy, where only the membrane called the pleura is inflamed, a large, full-drawn blister or two upon the side will lessen the pain, soreness, and disease of the part. But when the whole substance of the lungs comes to be inflamed, as in peripneumony, a blister does not hold the same proportion to the disease, and of course has less control over it. If, however, only a portion of the lungs is inflamed, a large, full-drawn blister will have more effect. In many deep-seated, extensive inflammations, it would be impossible to blister the surface of the body in proportion to the magnitude of the disease. In more superficial inflammations and local affections, blisters often produce complete relief. To cure any disease, the means must be adapted to the end. The indiscriminate use of any remedy will be sure to bring it into disrepute. Time, observation, and experience, have sanctioned the use of blisters, and, by accurate observers, they will be ranked among the most charming remedies. In headaches, pain, and soreness of the joints, bones and muscles, inflammations of the membranes, palsy, epilepsy, rheumatism, and almost all local chronic diseases, they are indispensable. In the diseases of the eye and the ear, and in dyspepsia, blisters seldom fail to produce relief. No remedy oftener relieves the toothache than a well-drawn blister.

Blisters are often used to produce an issue. The blister is first drawn, the water let out by pricking, and the bare surface of the place spread over with the savine cerate, or the powder of tartar emetic. In chronic inflammations, the irritation and the running of the issue have sometimes produced the happiest effects.

Blisters have the power of checking mortification.

Blisters are commonly produced by the agency of Spanish flies. The flies are powdered, sifted, and made into a salve with sweet oil and beeswax, and a little resin. Several other substances will raise a blister, such as mustard, horseradish, garlics, red pepper, and spurge.

BLOOD.—There are two kinds of blood in all breathing animals, the arterial and the venous. The blood in the arteries is of a light-red color, and that in the veins of a dark-red or purple color. The arterial blood supports life; the venous blood destroys life. Although the external properties of these two kinds of blood so nearly resemble each other, they differ as widely in their vital properties as either of them differs from the perspiration or the bile. The moment the venous blood begins to circulate in the arteries, and to be carried to the brain, the person turns purple and dies. Milk, or any other fluid, introduced into the arteries, would support life as well as venous blood. The arterial blood receives its vital properties in the lungs from a combination with the oxygen of the air. The venous blood circulates through the lungs, and in the process of breathing combines with the vital portion of the air, is changed to a lighter color, and prepared to support life, and to supply each part of the body with its constituent principles.

The quantity of venous blood in the human body is four times greater than that of the arterial blood. The whole amount of both venous and arterial blood in a common-sized person is twenty-eight pounds, or about one fifth part of the whole weight of the body. The motion of the blood in the veins is much slower than in the arteries. Both the arterial and the venous blood, when drawn from the body, and allowed to stand for a short time, coagulates, and separates into two distinct substances, or parts. One portion is watery, and looks like whey: it is called serum. The other portion is thick and tenacious, and swims in the serum: this portion is called the coagulum, or crassamentum. The coloring matter of the blood adheres to the crassamentum, but can be entirely washed out of it with water. After the coloring matter is washed out of the crassamentum, the remaining mass is white, transparent, and fibrous. This is supposed to be the substance of which all the fibrous parts of the body, the muscles, &c., are composed.

The serum, or watery part of the blood, heated to 156°, coagulates, or settles into a mass, which resembles the white of an egg, boiled. Indeed, it is the same substance, and is one important constituent of the human body. It is called albumen. It is of the same color and hardness of fibrin, but is not fibrous.

The medium temperature of the blood is one hundred and two degrees. In all animals which breathe the air, the blood is warmer than the medium which they inhabit; but in those who do not breathe the air, like fishes and reptiles, the blood is nearly as cold as the temperature in which they are placed.

The coloring matter of the blood, or that which gives it the red

color, is readily dissolved in water, appears to consist of globules like the other fluids of the body, and burns with a flame, leaving a coal which is very difficult to reduce to ashes.

The blood undergoes great changes, even in the blood-vessels, without destroying life. In some instances, it is very thick and black, and, in other instances, it will be very thin, watery, and of a light-red color, even in the veins. In many intemperate people, the color of the venous blood will be as light-red as the color of the blood in the arteries, and the quantity of crassamentum will not be more than one third its usual amount. In cases of inflammation there is a peculiar appearance in the blood after it has coagulated. This consists in a coat of horny, transparent-looking jelly, which rises above the rest of the coagulum, and forms a crust: it is called the buffy coat. The same appearance takes place in the drawn blood of pregnant women. We believe the matter of the buffy coat has never been chemically examined. The presence of this coat in the coagulation of the blood is considered a very good evidence of inflammation. The coagulation of the blood is a singular phenomenon. It was once supposed that it was owing to its being cooled. But blood which has been frozen and thawed will still coagulate. It is contended that the blood possesses life, and that its coagulation may be owing to some operation of the living principle.

Blood has sometimes been transfused from the arteries of one person into those of another. Soon after the circulation of the blood was discovered, it was thought that all diseases were owing to the state of the blood, and that by renewing the blood by infusing into the vessels the blood of a well person, or of some other animal, life might be prolonged indefinitely. After curing several horses and dogs in this way, an attempt was made in France to restore an idiot to his reason by infusing into his veins the blood of a calf. It was thought at first that his reason was restored, but, on making another trial, the idiot was seized with a bleeding from the kidneys, and died in a state of apoplexy. It was said that a leprous person, and a quartan ague were cured by this means. A trial was made upon a young prince of the blood royal, which proved fatal. The transfusion of blood was soon after prohibited by law. Some attempts have been made of late years, which are said to have been more fortunate.

BLOOD-LETTING.—From time immemorial, blood-letting has been employed as a remedy in diseases. In inflammatory diseases, it seems to be dictated by the nature of the symptoms. The blood-vessels are full and hard, and the force of the pulse, always an index of the force of the heart, is much greater than in a state of health. The action of the heart is not only more forcible than in health, but throws the blood into the arteries much faster. Both the quickness and the size of the pulse are increased. The surface of the body has more color, and all the blood-vessels which are in sight are engorged with blood. Vessels which were small before, in a violent inflammation, will become enlarged, not only in the

seat of the disease, but in other parts of the body. In this state of the system, it would seem to be one of the most natural deductions of reason to open a blood-vessel and let out some of the blood. Indeed, the blood, in some instances, forces its own way through the extremities of the blood-vessels, and moderates the violence of the disorder. In imitation of this effort which the system makes to relieve itself, artificial blood-letting has been invented, and in nothing does the art of medicine appear to more advantage than in this discovery.

Blood-letting will, in many instances, entirely remove the condition of the system which we have described; and where there is pain, excessive heat, and universal distress, a pint or two of blood taken out of the blood-vessels will relieve them all. The blood, in some way or other, is the cause of the heat of the body, and in inflammatory disorders, an excess of heat is one of the symptoms, and probably one of the causes of the inflammation. By lessening the quantity of the blood, the heat is suddenly lessened also.

There is nothing better settled, in any of the sciences, than that blood-letting will ease pain and distress, and still leave the system in a condition to recover the temporary loss of strength which it occasions. It will relieve pain and distress where the most powerful anodynes will only increase them. Blood-letting may sometimes do harm, but so will everything else which we can do. We often do harm, and lose life, by doing nothing. Disease is always attended with more or less danger; the time which we can employ in the cure is often short, and the severity of the pain and distress urgent for relief, and we are apt to employ remedies from a kind of instinct or intuition. We have no doubt but blood-letting is often employed from the necessity of the case, even where people do not understand the nature of its operation upon the system.

In many cases, the patient will have a hot, dry, parched skin, a burning thirst, and a universal distress; the blood will circulate rapidly, and the whole surface will look red. A suitable bleeding will bring a moisture to the skin, abate the thirst, lessen the heat, and operate as favorably upon the internal organs as upon the surface. This experiment has been tried as often as any experiment in natural philosophy or chemistry, and although not attended with the same degree of uniformity, the effect will, in many instances, just as surely follow the operation.

Blood-letting, to be employed in the right cases only, requires sagacity and observation. It is capable of being reduced to much more certain and obvious rules than its application has ever yet been governed by. We have no disposition to recommend it as an indiscriminate and universal remedy for all diseases; we only wish to rescue it from that disrepute into which pretenders to medical skill seem disposed to bring it. No remedy has stood the test of ages so well as blood-letting. Whether any other remedy is destined to take its place, is impossible to foretell; it

is very certain that none as yet has been discovered. So long as a spontaneous bleeding from the nose will relieve a pain in the head, the effort will be imitated by art in pains and inflammation of other parts of the body. The other organs have not so safe and easy an outlet, when crowded with blood, as the brain; nor does this organ always relieve itself when dangerously oppressed with blood. Here human sagacity, itself an ordination of nature, must supply what has been left unprovided for in a more direct way.

The cases in which blood-letting is proper to be practised will be found in the description of the several diseases to which it is applicable.

We wish to add one important remark upon this subject, — that blood-letting has been very properly withheld, of late years, in concussions of the brain where people are stunned, and in other injuries of the body requiring abstraction of blood, until the powers of life have completely returned, the pulse become full, and all signs of faintness have disappeared. It was formerly customary to bleed, as soon as the operation could be performed, without regard to the condition of the patient. A little reflection upon the subject will convince everybody of the improvement which has been made in the application of this remedy. Every year will probably add more or less improvement in the application of blood-letting to other cases. No remedy should be discarded or discouraged which affords the least prospect of saving human life, or of curing disease. The man who abandons himself to the use of a single remedy abandons himself to a phantom.

Another improvement in the abstraction of blood consists in the more extended use of leeches, scarifying, and cupping. In local distempers, leeching is more effectual and more safe than venesection. The Spanish and German leeches are now imported in large quantities, and a still more general and frequent use of them would render them very cheap. They ought to be rendered as cheap as blood-letting can be performed with the lancet.

BLOOD-ROOT. — The stalk of the blood-root is six or eight inches long, and of the size of a quill. It grows everywhere in the United States, and is a native to our country. The leaves are roundish, one only to a stalk, and deeply indented; the stems are naked, and the blossoms white. The root is of a pale-red color. The juice of the root is a pretty good flesh paint. The root possesses the chief medicinal virtues of the plant. Its properties are those of an emetic.

To produce vomiting, eight grains of the powdered root is the medium dose. In doses of fifteen to twenty grains, it occasions vomiting and prostration of strength; faintness and vertigo, or swimming of the head. It is much used by people in the country for the cure of coughs, influenza, and diseases of the lungs. In these complaints it is used in small doses, which produce only nausea and relaxation of the system. A nauseating dose of the powdered root is from one to three grains.

The blood-root has been given with success in the croup. The fresher the root is, the more powerful the effect. It is of little or no value after it is a year old. The best mode of giving it, in the croup, is in the form of a tea or infusion. One drachm of the bruised root should be added to a gill of boiling water, and allowed to stand for twenty minutes. One tea-spoonful of this tea should be given to the child every fifteen minutes, until it vomits freely. To children four or five years old, two tea-spoonfuls may be given.

Consumptive people often derive signal benefit from this medicine, in the moderation of the cough and loosening of the phlegm. The fine powder of the blood-root is sometimes applied externally to ulcers and cancers. Mixed with an equal portion of calomel, and taken as a snuff, it is said to have cured the polypus.

BLOTCHED FACE—Acne.—Between the ages of fifteen and thirty, the face, neck, shoulders and back are often more or less covered with red, hard, pointed blotches. This eruption seldom appears before the age of puberty, and commonly disappears by the age of thirty. It seldom affects the chest or abdomen, or the lower part of the body. The little tubercle or blotch begins with a small hard lump, about the size of a common shot, under the skin, and gradually increases in size until it reaches the size of a pea. As it rises above the skin, it grows red and sore; and in the course of a week or two the top of it looks yellowish, and, if slightly pressed, emits a small particle of matter, almost always quite hard. Sometimes a dozen or twenty of these blotches will appear on the face at once, especially about the chin, lower part of the face, and under the jaws. At other times, two or three of them will run together, and the largest blotch will mature and break, and the smaller ones subside without suppuration. The matter which is pressed out of these blotches often looks very much like a little worm, and has led many people to suppose that it really was such; but it is only the shape, which the matter assumes in appearance, of a worm. Many of the pimples do not form matter, but increase to a certain size, become red or purplish and sore, and then subside, leaving a dark-red, disagreeable spot in the skin, but which in time becomes white again. These blotches will continue to come and go, in a greater or less number, during the whole period from puberty to manhood, unless cured by some process of nature or art. Married people are less liable to this disease of the skin than single ones. The back and shoulders will sometimes be as thickly covered as the face. The blotches will sometimes almost entirely disappear for a considerable length of time, and then break out again as bad as ever.

Medical writers have divided this eruption into several different species, but as they all require about the same mode of treatment, and only appear to be different degrees of severity in the same eruption, it will be unnecessary to describe them.

The blotched face, or blotched skin, is purely a disease of the skin. The subjects of this eruption generally enjoy good health

Occasionally there will be some little disorder of the stomach, such as acidity, or a temporary indigestion — but in the main, the general health is unimpaired. This eruption very much lessens the beauty of the skin, or fairness of the complexion, and should always be counteracted by all the means in the person's power.

Domestic Remedies. — The frequent bathing of the whole skin, both with warm and cold water, is one of the most powerful means of clearing the skin of all eruptions. A young person, in health, can hardly bathe too much. For this purpose a bathing-tub is by no means necessary, although very convenient. A sponge, or a cloth, will always answer the purpose. Warm water is the most solvent and cleansing, and cold water the most strengthening. In case of a blotched skin, the subject should wash, first in warm water, and then in cold, and should practise it every day, as long as the eruption lasts. Where the disease is not entirely cured by the bath, it will be very much lessened. The person should take a good deal of exercise, and avoid stimulating drinks. The living should be plain and nourishing. If the disease is not conquered by bathing and rubbing, — which last is almost of as much importance to a healthy skin as bathing, — the skin, as far as the eruption extends, should be thoroughly washed, every day, in new rum, and after this has been practised for some time, alcohol should be used. People often wash in rum, or alcohol, for a few days, and then lay them aside; but if a cure is to be made, these washes should be continued daily as long as the eruption continues. Where these fail, the spirits of camphor should be used in the same way. Stimulating lotions are much better than astringent embrocations. Alcohol stimulates the action of the whole skin, and fortifies it against the disease; whereas astringent medicines only act temporarily, and make the skin rough. Cologne-water, however, has considerable efficacy in lessening eruptions of the skin. Vinegar is a good wash in some cases. Boiling water poured upon a piece of sulphur, and allowed to stand for ten or twelve hours, also makes a very healing wash for the skin. Salts, and a variety of purgative medicines, are often used with a view of purifying the blood; but, in general, all cathartic medicines are injurious, and only aggravate the eruption.

Professional Remedies. — The idea that all eruptions upon the skin proceed from a disorder of the stomach, or impurity of the blood, we hope has become obsolete, at least among the profession. Where the stomach discovers no disorder, we have no right to infer any; and where the constitution, in general, betrays no affection, we have no reason to suspect any impurity in the blood; for an impure blood could hardly avoid diseasing every part alike. To suppose the skin to be diseased from an impure state of the blood, while every other part of the body is sound, is a mere assumption. We hope, therefore, that no medical man, in the present state of our knowledge, will assume that the stomach, or the blood, is the seat of disease, unless they discover positive proofs of derangement. In cases of general weakness of the system, tonic medicines will be

very proper. The tincture of muriate of iron, or the carbonate of iron, in pills, may be taken, every day. The quinine, or colombo, may also be given. A wash made of the muriate of mercury dissolved in alcohol is sometimes found to succeed in restoring the skin, where other expedients have failed. Turner's cerate will occasionally prove effectual, where a little of it is rubbed on every night, and washed off in the morning. The citrine ointment, which is made of nitrous acid, quicksilver, lard, and olive oil, is an old, but very good application. Solutions of the sugar of lead, sulphate of zinc, muriatic acid, and other cooling lotions, in obstinate cases, should be tried. Some one article will often be found to succeed where several others have failed.

The red nose which is produced by intemperance, can only be cured by removing the cause. It sometimes occurs in temperate people, but the case is very rare. The same local remedies, which we have recommended in the blotched face and skin, are applicable to the inflamed surface of the nose. This form of disease is sometimes relieved by a mild course of mercury, particularly where the liver is affected. Fowler's Solution, in eight drop doses, given every day for two or three weeks, has been found of much service. Where the local inflammation is considerable, and attended with swelling, poultices and fomentations will be required.

BLUE FLAG, OR FLOWER DE LUCE. — The medicinal part of the plant is the root. In the dose of a few grains only, it is a strong purgative. It is also a diuretic. The stem is two or three feet high, bearing from two to six beautiful flowers. It is highly esteemed in the cure of dropsy. Dose of the powdered root is from fifteen to twenty grains. It is found in bog meadows and swamps. According to the testimony of Dr. Bigelow, it is apt to occasion a distressing nausea and prostration of strength.

BLUE OINTMENT. — See *Mercurial Ointment*.

BLUE VITRIOL — Sulphate of Copper. — This article is made by burning sulphur among plates of copper. The sulphur is converted into an acid, and combines with the copper. It has a sweetish, styptic taste, and, upon the raw flesh, is corrosive. Taken internally, it operates powerfully as an emetic. The powder of blue vitriol, sprinkled upon old sores and ulcers, destroys the callos edges, and prepares them to heal. It is much used as an escharotic. The dose for an emetic is from two to five grains. A solution of it in water, in the proportion of a scruple of the vitriol to eight ounces of water, is often used as an injection, in protracted cases of the clap. The powder, applied to chancres, will heal them, but mercury must be used internally at the same time.

The blue vitriol, as an emetic, has often been used in the cure of consumption. Dr. Senter, of Newport, considered it one of the safest and best remedies in the cure of that disease. He advises seven grains of it to be mixed with as many grains of ipecac., and made into pills. This dose is to be taken, every second or third day, in the morning, fasting. In one case which came under our care, the medicine proved completely successful. We are aware

that some physicians have no belief in the cure of consumption; but we think it is, in its early stages, a curable disease. Everybody considered this man to be in a consumption, and we have every reason to believe that he was cured by the medicine. He took an emetic every day for two or three weeks.

BOIL. — The boil is a painful, hard, circular, red tumor, which generally maturates, and discharges, together with pus, a kind of core. In most cases, they come singly, and are not often larger than a pullet's egg. But, in some cases, they infest every part of the body, insomuch that motion is painful, and even lying in bed extremely uncomfortable.

The pain may be somewhat alleviated by a dose of morphia or laudanum; and motion much better performed by covering the boil, or boils, with a plaster of lead salve, called diachylon. A lead plaster has always been our standing remedy for a boil. The plaster should more than cover the boil, in order to support the skin and flesh for some distance around it. It lessens the soreness very much, abates the pain, and defends it from the rubbing of the clothes and other injuries.

In some instances, where the pain is excessive, a white bread poultice, with a tea-spoonful of laudanum in it, will be advisable. It is generally useless to try to dispel them. Bleeding, purging, and a low diet are required in some constitutions. Lead-water, strong vinegar, and opodeldoc are sometimes used to dispel them.

The common plaster of shoemaker's wax operates upon the same principle with the diachylon plaster, and may be used where the other cannot be obtained.

Boils are most apt to affect children and young people. They follow the bowel complaint, fevers, small-pox, measles, and some other diseases. The quinine must sometimes be used to strengthen the system. In general, it is best to open them with a lancet. See *Carbuncle*.

BONES. — The total number of bones in the human body is two hundred and forty-eight. The skull, which appears to be one bone, is composed of eight. The number of bones in the spine is twenty-four. There are seven in the neck, twelve to which the twenty-four ribs are attached, and five lumbar bones.

The twenty-four spinal bones are called vertebræ. In each of the vertebræ, there is a hole or foramen, about the size of the fore finger, through which the spinal marrow passes, from the brain down to the base of the trunk.

In the shoulder, arm, wrist, and fingers, there are thirty-two bones, or sixty-four bones in both the upper extremities. In both of the legs, from the thigh-bone down, there are sixty-eight bones, or thirty-four bones in each of the lower extremities. In the feet and toes, there are forty-six bones.

Twenty-five bones, in addition to the twelve spinal bones, form the frame-work of the chest, viz: the sternum, or breast-bone, and twenty-four ribs. There are fourteen long ribs and ten short ones. The long ribs, seven on each side, join the sternum, or breast-bone.

The long ribs are called *true*, and the short ones are called *false*. The pelvis or basin is formed by two semi-circular, thick, strong ones, called the ossa innominata, or unnamed bones, and by the sacrum.

There are thirty-two teeth; eight cutting-teeth, four dog or canine teeth, and twenty double teeth. There are eight little bones in the mechanism of the ear, four in each, which form a small chain. Fourteen bones compose the frame-work of the face. The tongue has one bone at its base, in the shape of a horse-shoe, or the letter V. There are two bones, which form the lower termination of the spinal column; one is called the sacrum, and the other the os coccygis. The sacrum joins the two hip-bones, or ossa innominata.

In the legs and feet there are sixty-eight bones.

Some of the bones are hollow, and others are solid. The bones are the basis of the system. To them the muscles are attached, and they support all the other parts of the body. They give a shape to the body, and contain and defend all the vital organs.

The bones of different individuals differ in length, size, and thickness. The bones of some people compose a great part of the weight of the body, while those of others are remarkably slender and light.

The bones can be stained with a red color, while in the living animal. This is done by eating, for two or three weeks, a substance called madder.

Cartilages, membranes, and bones, are, in the formation of the system, all of the same structure and substance. Membrane is a sheet of gelatine, or jelly, interspersed with vessels and nerves, and containing a small proportion of albumen, which gives it a degree of firmness. Cartilage is membrane, with a larger proportion of albumen, which gives it a still greater degree of firmness. The stiffness and strength of bone are owing to the addition of lime or earthy matter to the cartilage. The cartilage secretes earthy matter from the blood, and becomes gradually hardened. In young animals, in calves, for instance, the bones are mere jelly or gristle; but as they grow older, earthy matter is gradually deposited, which renders them hard.

The surface of bones is hard and compact, but the inside is spongy, and admits the entrance of numerous blood-vessels. They are covered with a tough membrane, called the periosteum, which strongly adheres to them, and affords a bed for blood-vessels. In a state of health, the bones are insensible, but they are susceptible of inflammation, like the soft parts, and in this case become acutely sensitive; of this the teeth are a striking example.

The marrow is a fatty substance, filled with a great number of blood-vessels. The bones are composed of fifty-one parts, in a hundred, of jelly or gelatine, thirty-seven parts of the phosphate of lime, ten parts of the carbonate of lime or chalk, with one or two parts of magnesia. Lime and magnesia are the earthy substances which give bones their hardness.

Between each bone composing the spine there is a thick layer of ligamentous substance, which forms a bed for every separate bone. The weight of the superincumbent body pressing upon this substance during the day, while the person is in an erect position, brings the bones of the spine nearer together, so that he is an inch or so shorter at night than in the morning. Tall people appear to the most advantage in the evening.

BORAX.—This substance is crystalline, transparent, and of a greasy feeling. In the East, and in South America, borax is found in a native state. There is no medicine for which we have a greater partiality than for borax. It appears to us to be as healing internally as externally. Applied to sores and ulcers upon the surface of the body, either in the form of solution or powder, it is one of the best of remedies. Its chemical composition is boracic acid and soda. Its taste and nature are styptic and astringent. It dissolves in six times its weight of hot water. Cold water does not dissolve more than one third as much. The borax is best known in the cure of the sore mouth. In the bowel complaint of children, attended with aphthæ or sore mouth, we have found the borax as friendly to the disorder of the bowels as to that of the mouth. Two grains of the powder, or about as much as can be taken upon the point of a penknife, dissolved in a table-spoonful of warm water, may be given to a child between six months and two years old, every four hours. The canker appears in many instances to extend to the stomach and bowels, and the borax is an appropriate remedy. To larger children, it should be given in larger doses.

Nursing women will find as much benefit from this medicine, in the canker, as little children. The borax, taken in a dose of five or six grains, every three or four hours, through the day, dissolved in cold or warm water, will often effect the most signal cures. It allays the heat, moistens the mouth, and disposes the canker spots to heal immediately. We would not part with this old remedy, for all the new ones which we have ever tried. In the canker, both of adults and children, it appears to us necessary that the borax should be swallowed. It can be used as a wash or gargle, either in powder or solution, but is more efficacious if taken internally. In swallowing it, it has all the effect of a gargle, in addition to its operation upon the stomach and bowels.

In the venereal sore throat, taken in the same way, it is the best remedy which we have ever employed. A drachm of it should be dissolved in ten table-spoonfuls of water, and one table-spoonful swallowed every three hours, during the daytime. A strong gargle should be used at the same time.

BOWEL COMPLAINT OF CHILDREN.—The complaint which we wish here to designate is a mixture of cholera morbus, dysentery, and diarrhœa. In this complaint there is always a looseness of the bowels, and in the beginning of it there is sometimes sickness of the stomach and vomiting. The discharges from the bowels, in some cases, consist of a great proportion of water,

mixed with the natural fæces, and tainted with a rotten kind of smell. In other cases there will be a large quantity of mucus, or slime, instead of water. In a third species of the complaint, there will be small dots of fresh blood, mixed with the half-digested contents of the bowels. In many cases, there will be a mixture of slime, blood, fæces, bile, and a wheyey kind of substance, which is probably composed of the juices secreted by the digestive organs. In children at the breast, who subsist on milk, the discharges consist of curdled, undigested milk, which is often of a gray or clay color, and scanty in quantity.

Children in this complaint show evident signs of griping and pain, although the appetite, in some cases, will remain quite good. There is more or less thirst, a scantiness of urine, and, in most cases, a dry skin. There is not always an excess of heat, although a hot skin is a common attendant. In protracted cases, the legs, feet, hands and arms are, for the most part, cold.

A uniform symptom, in this disease, is a wasting of the flesh. The child is worrisome, cross, restless, and seldom refreshed with sound sleep. If much vomiting attend the disease, the child is soon cut off.

In grown people, the cholera morbus, dysentery, and diarrhœa, are, for the most part, distinct diseases; but in children they all unite in the bowel complaint, and form one disease. If a child is attacked with a pure cholera morbus, or cholera infantum, as it is sometimes called, it is much oftener fatal than in grown persons. But a pure diarrhœa, or a pure dysentery, in children is not much more fatal than in adults.

The bowel complaint of children is a disease of the summer and autumn; especially the latter part of summer and beginning of autumn. It attacks children of all ages, but is most common and most severe during the period of teething, which together with the heat of the season appear to be the principal causes in producing and keeping up the disease. Where these two causes are absent, children go through with the disease about as well as adults.

The canker, in children, appears to be produced by the same causes, and is always a great aggravation to the bowel complaint. In some instances, the stomach and bowels of children appear to participate in the canker of the mouth. Where teething, canker, and the bowel complaint, all unite in the same child, they compose a formidable disease.

If the disease comes on in the form of cholera morbus, or puking and purging, there is always a fever. If it is a dysentery, or a discharge of bloody matter, principally, there is also more or less fever; but if it is a simple diarrhœa or looseness, there is seldom much fever, and much less disturbance of the appetite than in cholera morbus and dysentery.

Domestic Remedies.—In whatever way the disease commences, whether by vomiting or purging, or both, we think it is best to stop the disease by laudanum or paregoric.

Five drops of laudanum in a table-spoonful of castor-oil is our usual dose for a child a year old. A child between two and three years should take from seven to ten drops of laudanum in the same quantity of oil. In most cases this will be enough to still the bowels, relieve the pain, and cure the sickness at the stomach. But in some instances, it will be necessary to repeat the same dose at the end of eight hours; but if the oil operates freely, only the laudanum should be repeated.

The dose of oil and laudanum should be given every day, as long as the disease continues. In mild cases, it will not be required oftener than every other day. The object in this treatment is to check entirely the diseased motion of the bowels, and to have nothing pass them but what is the effect of the oil or other physic. If the child is used to taking laudanum or paregoric, a still larger dose will be required. Children older than three years may take from ten to twelve drops of laudanum in a table-spoonful of castor-oil.

We believe oil to be the best purgative which can be given to a child in the bowel complaint, but other purgatives will answer, where the oil cannot be retained, or does not remove the disease, such as rhubarb and magnesia.

Professional Remedies. — The purgative which is the surest to stay upon the stomach is calomel. Three grains may be given to a child from six months to a year old; and five grains to a child from one to five years old. Where there is sickness and vomiting, it will be sometimes necessary to give this medicine, merely on account of its disposition to remain upon the stomach in spite of the vomiting.

A mixture of laudanum and sulphate of zinc in solution, and Dover's powder with minute doses of calomel, will often be found effectual in this disease.

If the discharges are tainted with sourness perceptible to the smell, a dose, or a tea-spoonful, of the calcined magnesia may be given instead of the oil.

In obstinate, protracted cases, two grains of the powder of ipecac. in molasses, or some other vehicle, given once a day for a week or a fortnight in succession, has produced many cures. Next to the oil and laudanum, we esteem the ipecac. the best remedy. The ipecac. is given without the laudanum or any other anodyne. Two grains of ipecac. may be given to children at any age between six months and three years old. In this dose, it operates as a purgative.

In some cases, we have substituted the Dover's powder, instead of the laudanum, in a dose of three to five grains.

In cases of canker, one or two grains of borax, in powder, or dissolved in water, should be given to the child, morning and evening. A mere gargle is of little service. The borax is friendly both to the stomach and bowels, which are often in the same condition with the mouth.

If the child nurses, no other nourishment is necessary but the

child should be restrained to much less than its usual quantity, even of breast milk. For older children, boiled milk, mixed with one half water, is the best nourishment. Flour and arrow-root gruel may be given where there is much fever.

The drink may be cold water, or bread-water, and a solution of gum arabic in water.

The body should be often washed with lukewarm water; and, if there is much pain and soreness in the belly, the bowels should be bathed with warm brandy, or hot herb teas. A few drops of laudanum may be rubbed upon the stomach and bowels.

Injections of flax-seed tea, starch, and other soothing substances, will often be found useful. Laudanum and other medicines can sometimes be insinuated into the bowels in this way, when they are rejected by the mouth.

Vegetable astringents are better for children than the mineral. The best vegetable astringents are the logwood, catechu, and kino. These medicines, dissolved in water, may be given with considerable freedom. The borax is, however, a mineral astringent of much power, and very harmless in its effects.

Blood-letting, in this disease, is not often required, but when necessary, it had better be done by leeching.

The morphine, being deprived of the astringent property of the opium, is much less suitable to this complaint than laudanum or paregoric.

If the disease becomes chronic, or continues a long while, a grain of quinine, once a day, for a week or two, has sometimes effected a cure.

BOWELS.—The bowels are contained in the cavity of the belly. They extend from the stomach through the body. They are wound into a ring, like the worm of a distillery. The bowels are one entire tube, but are divided into four different portions, on account of certain anatomical and functional differences which these portions discover. The portion next to the stomach, which is only about a foot in length, is called the duodenum. Into this part of the bowels the bile flows, through a duct which enters it near its middle. The pancreatic juice also flows into the same portion of the bowels. The chyme, received into the duodenum from the stomach, mixes with the bile and pancreatic juice, and, from some chemical action of the whole together, the chyle is formed. This is a white fluid, resembling milk, and is taken up from the bowels by a set of minute vessels, called lacteals, and conveyed into the veins through a common vessel, called the thoracic duct. This duct enters the vein of the left arm near its junction with the jugular vein, and is about the size of a crow's quill.

The upper portion of the bowels is much smaller than the lower portion. The common diameter of the upper portion is not more than one inch, while that of the lower portion is three or four inches. The small intestine, or the first portion of the bowels, is, in length, at least four times greater than the large portion. The whole length of the intestines, in man, has been estimated at twenty-six feet, or

about five times his own length. In children, they are ten times the length of the child.

The portion of the intestine next to the duodenum has been called the jejunum, a Latin name, meaning empty, because it is always found in that state. This portion lies coiled in a circle in the centre of the belly. The inner coat of the jejunum is lined with lacteal vessels.

The next portion of the bowels is called the ileum, the breadth of fifteen hands in length, or about five feet. It is commonly found filled with fluid, fecal matter. This portion enters the large intestine transversely, or into its side, leaving a small portion of the large intestine above, which is called the cæcum, or blind pouch. This part, called the head of the colon, is about three inches in length, and runs up above the place where the ileum enters. At the entrance of the ileum into the large portion of the bowels, there is a valve to prevent the return of the feces from below.

The large portion of the bowels is divided, anatomically, into two other parts, called the colon and rectum. The colon makes one turn round the belly, and ends in the rectum, which is short and straight.

The colon and rectum contain hard feces. When a fluid injection is given, it never ascends above the valve of the colon, or the large intestine, being prevented from going further by the valve; although, by the use of a force pump, it is thought that this valve may be surmounted.

The bowels have a motion of their own, like the heart. This motion, called the vermicular motion, or peristaltic motion, urges along their contents until they are finally expelled. In grown people, the food stays in the bowels about twenty-four hours. The food which we eat one day is not expelled until the next. Digestion is performed in about three hours, but the refuse of the food, or the excrement, takes some time to travel through the whole length of the bowels.

The bowels are composed of three coats: a membranous coat, formed by the peritoneum, or lining of the belly; a fibrous coat, and a villous or inner coat. They are attached to and kept in their place by the mesentery, a large, thick membrane, which proceeds from the back. The mesentery is composed of a duplicature of the peritoneum. Over the bowels, in front, hangs the omentum, or caul.

In animals that live upon vegetable food, the bowels or intestines are long, and in those that feed upon flesh they are short. The length of the bowels in man would seem to indicate that he should live upon a large proportion of vegetable food. The bowels in the human subject are not so long as those of many animals that live entirely upon vegetables, as of the ox, for instance, but are very much longer than those of the lion or tiger, that live upon flesh. Vegetables seem to require a long tract of intestine to digest and convert them into blood, but flesh, which is nearly in a state of nutriment, demands only a short process, and a shorter journey.

BRAIN.—The texture of the brain is very different from that of the other parts of the body. An idea of the texture of the human brain may be formed from the brain of a calf or of a sheep, which is often dressed for food. The brain is divided into two distinct parts, separated by a thick membrane or partition. The upper part is called cerebrum, and the lower part cerebellum. The cerebrum is about eight times larger than the cerebellum. The brain is also separated into halves by another membrane, which divides both the cerebrum and partially the cerebellum from the top to the base of the skull. The two halves of the brain, the right and the left, are formed precisely alike, and are of an equal size. The outside of the brain is of the color of wood ashes, and is called the cineritious substance, and the inside is of a white color, and is called the medullary substance. The cineritious part, which is also called the cortical part, is not very essential to life. Portions of it have been destroyed, and life still preserved. The brain has a curious structure, the constituent parts of which are quite numerous, and their uses or offices but very little understood. To explain the offices of the brain would confer upon the discoverer immortal honor.

There are three cavities in the brain: one situated in each side or in each half, and a third cavity situated between the two beds of nervous matter, from which the optic nerves originate. In a dropsy of the brain these cavities are often found filled with water. It is needless here to notice the several prominences of the brain.

The whole of the brain is enveloped in three membranes, or sheets of fibrous matter. The outside membrane is thick and strong, and is called the *dura mater*. The middle membrane, called *arachnoides*, is destitute of vessels, and is thin. The third, or innermost membrane, called the *pia mater*, is vascular. Nearly in the centre of the brain there is situated a small body, called the pineal gland, which, by some, has been supposed to be the centre of thought, or seat of the soul.

From the brain proceeds the spinal marrow, which is one and the same substance with the brain. The brain also gives off nine pairs of nerves. The spinal marrow gives off thirty pairs of nerves. The nerves proceed out of the brain through little holes or foramina, perforated through the skull bones. The nerves which go to the right side of the body originate from the left side of the brain, and those which go to the left side of the body arise from the right side of the brain. This explains the reason why a blow received upon one side of the head will paralyze the opposite side of the body.

The brain is supplied with an extraordinary number of blood-vessels. These vessels are large and convoluted. The brain is supposed to contain one eighth part of the whole blood in the body. The brain and the nerves which proceed from it are the seat of sensation and thought. The brain, spinal marrow, and nerves are all one and the same substance, and discharge a similar office.

BRAIN FEVER — Phrenitis. — The disease called the brain fever is an inflammation of the substance of the brain and of the membranes which enclose it. It is not, strictly speaking, a fever, although accompanied with a very high degree of fever. The fever is a consequence of the disease, but does not constitute the disease itself. It is better for everybody to have right than wrong notions upon any subject, and where common names do not convey the truth, they must be explained. That the brain fever is an inflammation, or, in other words, that the substance of the brain and its membranes are red, swelled, and painful to the touch, in this disease, as in other inflamed parts and organs, is known, not only by the inflammatory symptoms which accompany it, but by the appearance of the brain on dissection. After death, the brain, in these cases, presents all the redness, engorgement of the blood-vessels, and thickening of the membranes, which characterize inflammations of other parts.

The brain fever comes on with a violent, deep-seated pain in the head, an inability to sleep, redness and swelling of the eyes and face, an impatience of the light and also of noise, and a raving delirium. There is also a violent heat in the head, which extends over the whole body, a strong, hard, quick pulse, furred tongue, and a scantiness of the urine. The eyes are wild, raving and sparkling, and the patient neither knows where he is nor what he is about. He only mutters and moans, or utters incoherent sentences. The breathing is deep, and the restlessness great.

Where an inflammation of the brain is the sequel of other diseases, as of fevers, bowel complaints, and inflammatory affections of other organs which finally extend to the brain, the eyes and face will be pale instead of red, and the features will be shrunk instead of being bloated. The pulse will be small, hard, and rapid. An inflammation of the brain which happens in consequence of other diseases, has been denominated symptomatic; and an inflammation of the brain which comes on in a state of general health, an idiopathic inflammation.

The brain fever is produced by an exposure of the bare head to the hot sun; by excessive study; by mental excitement of every kind, religious, political or convivial; by intoxication and intemperance; by severe exercise and overheating the body; by blows upon the head or concussion by falling, and the suppression of accustomed evacuations, such as the menses, the milk, and the piles. To these causes may be added excessive venery, long want of sleep, and many acute diseases.

The brain fever may be distinguished from mental derangement, by the deep-seated pain in the head, the furred tongue, and the high fever; and from the common delirium which happens in low, nervous fevers, by the redness of the countenance and of the eyes.

Remedies. — Very little can be done with propriety in this disease until the patient has been bled. In no disease is bleeding of more importance than in the brain fever. The opening of the vein

should be large, in order to secure a full stream, and a quantity should be taken sufficient to make an impression upon the whole system. There will be no harm in producing a slight degree of faintness by the loss of blood. The head should be immediately shaved, and cold water constantly applied to it; and, where ice can be obtained, iced water should be used. The bowels should be drained by salts, or some strong purgative; and a quarter of a grain of tartar emetic and six grains of nitrate of potass should be given in solution, every hour, until a moisture is produced upon the skin. The drink should be cold water, soda powders in solution, and the acetate of ammonia in a state of effervescence. The acetate of ammonia is a powerful sudorific, and, at the same time, a refrigerent to the stomach and head. Such is the degree of heat and fever in the onset of this disease, that bathing the feet in hot water might only increase it; and, for the same reason, blisters are inapplicable until after the fever has somewhat abated. If the inflammation and the violence of the symptoms are not subdued by one bleeding, another must be resorted to. Where leeches can be procured in great plenty, it will be preferable to abstract blood by them; but it requires the aid of a great many of them, at least a dozen and a half at a time, for two or three successive operations.

Ether, applied to the head, will sometimes be found superior to cold water in reducing the heat and fever. Opiates, in every shape, are found to be inadmissible in this disease. As a substitute, Hoffman's anodyne liquor, in tea-spoonful doses, every two hours, will avail much in easing the pain and procuring sleep. The sweet spirits of nitre will sometimes prove a sedative. Four or five grains of camphor, and as many grains of James' powder, or the pulvis antimonialis, made into a pill, will have a tendency to quiet the commotion of the brain and to open the pores of the skin.

After the violence of the disease has somewhat abated, a large blister should be applied to the nape of the neck, and repeated, if relief is not procured by the first. Blisters must be applied to the arms, between the elbows and shoulders, if the motion of the head, in consequence of the delirium and restlessness, prevents the application to the head. Digitalis and hyoscyamus, or the henbane, have been advised in this disease, but we have never tried them. It has been advised that the patient should be kept in an erect posture, as much as possible, by pillows and cushions placed under the head and shoulders. The light should be excluded from the room and all confusion avoided. The room should be kept comfortably cool and well supplied with fresh air. The nourishment should be bread-water, rice-water, arrow-root, and Indian gruel.

The symptomatic brain fever, which follows upon other diseases, requires a less active treatment than that which arises in a state of general health. But this form of the disease, if it is in its first stage, and accompanied with much pain, and a quick, hard pulse, will require the abstraction of blood either by leeches or the lancet. The purgatives, however, should be of a milder nature, and ad-

ministered less frequently. In some instances, the dispensation of an injection will be sufficient. Rochelle powders may be given instead of more drastic purgatives.

This disease is always dangerous, especially when it arises in consequence of falls, blows, and concussions. It often proves fatal between the third and seventh day; and, where it lasts longer, is apt to end in mental derangement, idiocy, or some degree of mental imbecility.

The fatal symptoms are a fluttering pulse, cold sweat, startings of the flesh or muscles, and grinding of the teeth.

There is one symptom of this disease, especially where it arises from injury done to the brain, which has not been much noticed by medical writers, and that is, a nausea and sickness at the stomach, and sometimes a bilious vomiting. This is an affection very difficult to control. If we give opium to allay the sickness, it only increases the inflammation of the brain, and the matter is made worse. And very often calomel is the only medicine which will be found to stay upon the stomach, and should be given freely. Effervescent draughts can be given to allay the irritation of the stomach.

BREASTS — *Mammæ*. — The breasts of females are glandular organs, like the liver, kidneys, and pancreas. The office which they perform is conditional; in this they are unlike the other glands. Pregnancy seems to be a necessary condition to the execution of their office. These glands consist of a white, spongy substance, and congeries of veins, arteries, and lacteal or milk-vessels. After the milk is secreted from the arterial blood, it is poured into thirteen or fourteen little ducts or canals, which end in a common tube which passes out at the nipple.

About the third day after delivery, the milk begins to be secreted in abundance. If the mother live upon a mixture of animal and vegetable food, the milk does not turn sour spontaneously, like cow's milk; but if she live upon vegetable food alone, it becomes sour by the ordinary degree of heat and standing. Some mothers will not give more than a pint of milk a day, while others will give twice or three times this quantity. After a woman has once begun to give milk, she will continue to nurse for several years, if not interrupted by the birth of another child. The longer children are kept to the breast and live upon the mother's milk, the stronger and healthier they will be; or, in other language, the longer the time between the birth of children, the better health they will enjoy and the more likely they will be to live.

BREATH. — Nothing is more disagreeable to others than a foul breath. The lustre of both beauty and accomplishments is often obscured by the foulness of the breath. Decayed teeth and ulcerated gums often give it the smell of putrefaction. In such cases, the ulcerous teeth should be pulled, or filled, and all the dying roots removed. An ulcerated throat will also taint the breath. But the worst smell often comes from the stomach. In such cases, there must either be a new secretion in the stomach,

or the juices and contents of that organ must undergo a putrefactive process.

The best medicine to sweeten the breath is ten or twelve drops of a solution of chloride of soda, or of lime, in a spoonful of water. This medicine, taken two or three times a day, and used as a gargle for the mouth and throat, will effectually neutralize the fetidness of the breath. Charcoal, used to rub the teeth and gums with, has a similar tendency. A tea-spoonful of the fine powder of charcoal, swallowed into the stomach, will also sweeten the breath. A fetid breath is always owing to some disorder of the stomach or the parts of the alimentary canal above it. We have known the breath of a person to become sweet in a very short time by some alteration in the health.

BREATHING — Respiration. — Everybody knows that life is supported by breathing, but in what manner it is done, is known only to those who have a knowledge of the human system and of the science of chemistry, or at least the properties of the air. The lungs are the organs of breathing. They are contained in the chest, and consist of two lobes, which are separated from each other by a strong, thick membrane, or fleshy sheet, which divides the chest into two chambers. The anatomical name of this fleshy partition is mediastinum. The lungs are spongy and full of little cells. The air is drawn into the lights or lungs through the windpipe. The windpipe, as it descends into the lights, divides into two smaller pipes, called the bronchia, one going to each lobe of the lungs. These two smaller pipes divide into numberless other still more minute pipes, and these last end in little air-cells. The blood is thrown from the heart immediately into the lungs, where it comes in contact with the air-cells. In this situation the vital part of the air combines with the blood, and prepares it to support life. As the food is digested and changed into chyme in the stomach, so is the venous or purple blood digested and changed into arterial blood in the lights. The whole venous blood of the system enters the lights of a purple color, and comes out of them of a bright-red or scarlet color. It is the bright-red blood which vivifies and supports the system; the venous or purple blood will not support life for a moment. The lungs perform the same office for the venous blood which the stomach performs for the food.

It is well known that a person cannot breathe over the same air without feeling faint; and if compelled to breathe it over several times, he dies. This fact shows that the air, in being breathed over, loses a portion of its vital substance, or becomes changed in some way or other.

The air, by a chemical process, has been separated into two distinct elements or elemental airs. Both these kinds of elemental air are colorless and invisible, but are known by their different effects and weight. One kind causes bodies which have been ignited to burn with much greater rapidity than common air, and when breathed by men and animals, produces the highest degree of exhilaration and life. In the other kind of elemental air, nothing will

burn, and no animal can breathe it and live. The air which causes bodies to burn, and which supports life, is called oxygen, and the other nitrogen. The oxygen causes iron and other metals to rust, but nothing can rust in nitrogen. The common air contains twenty-one parts by measure of oxygen, seventy-eight parts of nitrogen, and one part of a deleterious air, or gas, called carbonic acid gas.

In air which has been breathed, and submitted to examination, it has been found that a portion of its oxygen has been extracted, and in the same air is found a quantity of carbonic acid gas, or choke damp as it is vernacularly called, just equal to the quantity of oxygen which was subtracted from the air. Hence, in the process of breathing, it is evident that the blood has subtracted from the air a portion of oxygen, and resigned a portion of carbon or charcoal. A part of the oxygen, or vital air, is supposed to have united with the carbon of the blood, and formed carbonic acid gas, and another portion to have united with the venous blood itself, and to have transformed it into arterial blood. In this process it is supposed that the heat of the body is elaborated.

One fact is very certain, that the more oxygen there is in the air the more heat is produced, and the more lively are all the motions of the mind and body.

A man breathes, that is, draws in and expels the air from the lungs, about twenty times in a minute; and the quantity of air in every breath is about three hundred and twenty-seven cubic inches. In twenty-four hours he breathes forty-eight pounds of air, and subtracts from it about two pounds of oxygen.

The breathing, or rather the motion of breathing, is performed by the contraction and relaxation of the midriff, the muscles of the belly, and the intercostal muscles, or those which move the ribs. The midriff, or diaphragm, is the chief agent in expanding the chest, and the muscles of the belly, in contracting it and expelling the air. The intercostal muscles act as an assistant. The ribs, in breathing, move upward and downward, and inward and outward.

The breath, when it issues from the lungs, is loaded with vapor. This vapor is secreted in the air-cells of the lungs, and absorbed by the inspired air.

The carbonic air, which is discharged from the lungs in breathing, is a real acid, very acrid and corrosive, and when breathed without mixture excites a violent coughing. Air, therefore, which has been breathed over and over again, must be very irritating to the organs of breathing. The freer the air is from this gas, the more congenial it is to the lungs.

BROMINE — Is an elementary substance, found chiefly in seawater, and in some animal and vegetable substances living in it. It is also found in many of the mineral waters, especially in the salt springs. It is a fluid of a dark-red color, with a strong, disagreeable smell and taste. It colors the skin yellow, is very soluble in ether, less so in alcohol, and still less in water. In an over dose, it produces coughing, nausea, and vomiting, with great restlessness, anxiety, and debility, gradually increasing until death takes place.

As a medicine, it is used chiefly in scrofulous affections, cessation of the menses, and in hypertrophy of the ventricles of the heart. The dose is two drops in a solution of gum arabic, gradually increased to twenty or more, in twenty-four hours. Its more common use, however, is in combination with other agents; the chief of which are iron, potassium, and mercury.

BROMIDE OF IRON—Is prepared by heating equal parts of bromine and iron filings under water; as soon as the solution becomes green, it is strained and evaporated to dryness; the reddish sediment is the bromide. It has a brick-red color, dissolves in water readily, and has a styptic taste. It is used in the same cases as bromine, but more particularly in affections of the uterus. The dose is from half a grain to two grains, morning and night, made into pills with gum arabic or extract of liquorice.

BROMIDE OF MERCURY.—There are two preparations of bromine with mercury, — the *proto* and the *deuto*-bromide. The first is about the strength of calomel, resembling it in its nature, though not as likely to affect the mouth as speedily or severely. The other, in an over dose, produces vomiting and purging, with severe colic, and excessive salivation. The dose of the proto-bromide is from four to five grains; of the deuto-bromide, from one twentieth to one twelfth of a grain, given in the form of a pill. Its principal use is in syphilitic affections.

BROMIDE OF POTASSIUM—Is made by dissolving bromine in alcohol, and adding caustic potash until it begins to change color, then evaporating and heating to redness. It has a taste like common salt, but more biting. It is more soluble in hot than cold water, and sparingly so in alcohol. It is milder in its effects than bromine, and is used internally, in doses of from four to ten grains daily, in form of a pill, in the same affections as bromine itself. Externally, in form of an ointment, in the proportion of half a drachm of the bromide to an ounce of lard, it is of service in scrofulous swellings.

BRONCHIA.—The windpipe, before it enters the lungs, divides into two tubes, one of which enters the right portion of the lungs, and the other the left portion. These two cartilaginous tubes are called bronchia. In entering the lungs the bronchia divide into an endless number of smaller tubes, which still divide until they become invisible. The terminations of the bronchial vessels form the air-cells of the lungs. The inside of the bronchial tubes are filled with little glands, which secrete a mucus. The bronchia are the seat of the disease called bronchitis, or inflammation of the bronchia. It is many times the seat of cough and difficulty of breathing. Being composed of cartilage, like the rest of the windpipe, the bronchia do not collapse, but remain constantly open.

BRONCHITIS.—An inflammation of the mucous membrane lining the air-passages leading into the lungs. Ancient physicians appear to have been unacquainted with the nature and seat of this disease, and though referred to under different names by Hoffman, Lieutaud, Sauvages, Morgagni and Cullen, the profession

generally had no definite knowledge of it before Dr. Badham, professor of the practice of physic in the University of Glasgow, published a small work upon the subject, comparatively, but a few years ago.

Bronchitis appears under two different forms, that of acute and chronic. The acute form is characterized by cold chills, followed by fever; hoarseness, difficulty of breathing, tightness or sense of stricture in the chest, and oppression at the pit of the stomach, prostration of strength, and costive bowels. The pulse is quick and hard in the first stage; there is always a dry, croupy cough, and an aggravation of all the symptoms at night. After a few days, expectoration or raising takes place, and there is a temporary mitigation of the symptoms; the respiration often, however, soon becomes more difficult, the tightness about the chest increases; there is a sense of suffocation, the pulse becomes very rapid; there is a deadly paleness or lividness of the lips and cheeks; the countenance is anxious, and the patient desires to be raised up and to have more air; there is a loud wheezing, and at length a rattling in the throat, insensibility, and cold perspirations; the extremities become cold and livid, and death closes the scene. This disease is very fatal in infancy and childhood, and is often mistaken for croup, which it very much resembles, but from which it may be distinguished by its being seated lower down, at the upper end of the breast-bone, whereas in croup the obstruction and noise in breathing are higher up in the windpipe. *In children*, the disease comes on like a common cold; the throat is often sore; there is severe pain caused by coughing, and the cough is suppressed as much as possible by an action of the will; the shoulders are in great and constant motion from the efforts made in breathing; the nostrils draw in, and there is a loud wheezing. The child refuses food, but drinks greedily, though it can take but two or three swallows at a time, for the want of breath. The phlegm is frequently vomited up spontaneously, as in whooping cough, with temporary relief; but it soon reaccumulates, and the sufferings return. If at the breast, the infant can nurse but a few seconds at a time; it bites the nipple, throws the head back forcibly and cries; the voice is shrill as in croup. Should the disease be unsubdued, all the symptoms become aggravated, the extremities swollen and livid, and the child dies from suffocation. Great oppression, feeble and rapid pulse, absence of heat and pain, a deathlike countenance, and a swollen and purple appearance of the face and extremities, are almost certain signs of a fatal termination. We have had occasion to witness a number of cases of this alarming affection in children from two to eight years of age, which proved suddenly fatal, and the painful impressions made upon our mind by the agonizing distress of the little sufferers can never be effaced. This, however, is the gravest form of the disease: it often manifests itself in a milder form, which readily yields to suitable remedies, and between these two extremes it assumes every degree of severity. The causes of bronchitis are the same as those of colds, catarrhs, or influenzas:

in fact, it is, in most cases, nothing more or less than a cold located upon the bronchia, and thereby producing a peculiar train of symptoms. Sometimes, however, it supervenes upon scarlet fever, and other eruptive diseases, and is probably caused by an extension of diseased action to this part. These cases are generally fatal. Dissolution may take place in two or three days in violent cases, or in those that are of a milder character it may be delayed to ten or fifteen days.

Remedies.—Mild cases may be successfully combated by domestic treatment; but if the attack be severe, there should be no delay in calling an experienced physician. The circulation should be equalized, and perspiration promoted, by bathing the feet in hot water, followed by mustard poultices, and copious draughts of warm balm or flax-seed tea, vinegar whey, or hot lemonade; and, if there be pain in the chest, the part should be fomented with a decoction of camomile flowers, or other bitter herbs. Mild emetics of thoroughwort, ipecac., lobelia, or hive syrup, should be given two or three times in twenty-four hours, and their operation aided by large quantities of warm water. During the intervals between the emetics, nauseating doses of the hive syrup, ipecac. or antimony, should be repeated every two or three hours, until the violence of the disease is subdued. Gentle emetics will be useful in every stage of the disease, and are our most potent remedies; but in the last stage, keeping up severe and constant nausea is liable to depress the system too much, and should be avoided. Should the emetics not move the bowels freely, a dose of castor-oil, or other physic, should be administered, and repeated, as the case may require. In violent attacks, bleeding will be indispensable, and should be practised promptly and efficiently. There is no remedy of so much importance, none to which the disease yields so readily, and with so much certainty; but it must be done in the first stage, as in the second it is of doubtful propriety, and in the last is positively inadmissible. Bleeding from the arm is generally the best mode, though in very young children, and when it is necessary to repeat the operation, leeching may be preferable. The best criterion as to the quantity to be drawn, and the repetition of the operation, will be the amount of pain and constriction in the chest and the pulse. If the pulse be hard and full, the pain acute, and the constriction great, the abstraction of blood will be beneficial. The inhalation of the steam of water, or a decoction of emollient herbs, is a remedy of great value, and should be frequently practised. In the second and last stage of the complaint, blistering the chest, and frequent doses of syrup of squills, lac ammoniac, decoction of seneca root, and hive syrup, which is well adapted to every stage, are among our most valuable remedies. No solid food will be required, but the system should be supported with water gruel, rice-water, or arrow-root. The apartment in which the patient lies should be warm, but airy, and free from dust and the gas of coal, and if a close stove be used, a constant evaporation should be kept up, from a vessel of water placed upon it. Great care

will be necessary, during convalescence, that the patient do not take cold, as the disease may relapse or degenerate into chronic bronchitis.

Chronic bronchitis frequently succeeds the acute, but it sometimes comes on slowly and insidiously, without any manifest symptoms of inflammation or fever. It affects persons of all ages, and is most frequently met with in those whose occupations expose them to the inhalation of dust and gases. It frequently coëxists with diseases of the heart, and, like the acute form, may follow eruptive fevers. It resembles consumption, and may be mistaken for that disease; it is a concomitant of some forms of asthma, and dropsy. The symptoms which ordinarily attend this form of disease are, a constant cough, and an expectoration of matter from the lungs; difficulty of breathing, frequent pulse, and night sweats; the symptoms are aggravated at night, and the sleep disturbed. The patient is very sensible to the changes of the weather. A damp atmosphere, night air, easterly winds, indigestible food, and costive bowels, are very sure to produce an aggravation of the complaint, and at such times the voice will be hoarse, the breathing more difficult, the cough croupy, and the whole system affected with the symptoms of fever. There is shortness of breath, and wheezing when taking exercise, and inability to lie down; dust or gas is insupportable. Expectoration, however, soon comes on, bringing almost immediate relief, and the patient is soon restored to his former condition. The matter expectorated is various in appearance and consistency. It may be viscid and colorless, corrupted, yellow or greenish, according to the degree and stage of the inflammation. Chronic bronchitis may terminate favorably in a short time, or, what is, perhaps, more common, be protracted for many weeks or months. On examining the bodies of those that have died of this affection, it has been found that the trachea and bronchia are filled with the same kind of matter that had been raised; the lining membrane thickened, and sometimes intensely red. In some instances, a false membrane has been found lining the bronchia, like that which forms in croup. The surface of the lungs is lighter colored than natural, and has the appearance of having air effused under the pleura or investing membrane, and the lungs do not collapse, as is usual when death takes place from other causes. When the disease has been of long standing, it is not unusual to find the bronchial tubes very much enlarged, forming considerable cavities in the lungs. These cavities have been mistaken for cavities produced by ulcerations or abscesses, and the great extent of the lining surface accounts for the astonishing quantities of matter that are sometimes secreted and raised, when the substance of the lungs is in a perfectly healthy condition. These cavities, called by physicians dilatations of the bronchia, may exist for many years without serious consequences, and are probably one of the causes of that kind of habitual cough and raising to which old people are subject, and which do not appear to abridge their term of life.

Remedies for Chronic Bronchitis.—This disease is often difficult to cure; medicines seem, in some cases, to have but little effect

upon it, though we occasionally meet with those that yield readily to medication. Counter irritation, by blistering, Croton oil, or, what is preferable, the tartar emetic ointment, and the occasional use of expectorants, combined with hyoscyamus, lettuce, cicuta or opium, may be serviceable. Perhaps there is no internal medicine better entitled to a thorough trial than the muriate of ammonia, sal ammoniac. It may be given in four or five grain doses, four or five times a day, combined with minute doses of antimony, or ipecac., and extract of liquorice. The copaiva, and other balsams, are highly recommended, and deserve a trial. Occasional emetics, and mild cathartics, are absolutely necessary, and should be resorted to, whenever the lungs are oppressed, or the bowels confined. The inhalation of the vapor of tar has been recommended as a sovereign remedy, and we have often witnessed very pleasant effects from it, in this, and other chronic lung affections. Bleeding is rarely necessary, but may be occasionally useful in moderate quantities, when the difficulty of breathing is great, and attended with pain in the chest, and febrile symptoms. All the causes that are liable to occasion an aggravation of the complaint should be studiously avoided. The clothing should be warm; a flannel or leathern jacket and drawers should be worn next to the skin, and the night and damp air be avoided.

During the inclement seasons, the use of the *respirator*, when much exposure is unavoidable, will be useful, in preventing the bad effects of the cold air and sudden changes. A change of the seasons, from cold to warm and dry, often cures or alleviates the disease, like a charm, and in imitation of this, when circumstances will permit, the invalid should remove to a warm climate, during the cold season. The situation chosen for a residence should be high and dry, and as far remote from the sea, and other large bodies of water, as is practicable. The diet must be plain, easy of digestion, and nutritious, and the strictest temperance observed.

BRONCHOCELE.—This disease is sometimes called the goitre. It is a fleshy tumor, which grows upon the front side of the neck. We never saw but two cases of it in this city. In some countries it is said to be common. The growth of the tumor throws the head back, and turns the face upward. It was once thought to be produced by the use of ice and snow water for drink, but this was only conjecture. It was also supposed to be confined to mountainous countries, but it is often seen in other situations. It probably originates like other fleshy or sarcomatous tumors, and is curable by the same means. Lead and mercurial plasters are commonly applied to them. Friction with camphor, opodeldoc, and other stimulating medicines, and the internal use of iodine, should be tried. These tumors are commonly harmless, although unsightly.

BRONCHOTOMY.—This is a surgical operation to open a passage for the air into the windpipe in cases of croup or suffocation from substances drawn into the throat. It is sometimes performed to inflate the lungs in cases of drowning or suspended animation. It is one of the most formidable-looking operations in

surgery, but openings are often made into the windpipe by wounds and accidents, and heal up without much difficulty. In France, the operation of late has become quite common in cases of croup. The English seldom perform it, and the United Statesians still more rarely.

BUBO.—A venereal bubo is a swelling of one of the external glands of the body. It usually appears either in the groin or under the arm. It is produced by the absorption of the virus of chancres and syphilitic ulcers. A bubo begins with pain and soreness in the groin, succeeded by more or less swelling and hardness; the swelling, at first, is not larger than a bean, but continues to increase in size, until it becomes as large as a hen's egg, and sometimes as large as a goose-egg. A bubo is generally attended with a throbbing, deep redness of the skin, and painfulness, though, sometimes, there will not be much acute pain. In a short time, the swelling maturates, and discharges a large quantity of pus; the pain, redness, and soreness, gradually disappear, and the sore heals. Occasionally a bubo will subside without suppuration, or it will turn to a scirrhus. Care must be taken not to mistake a bubo for other swellings, which sometimes come in the groin, such as aneurism, rupture, and lumbar abscess. If the swelling has been preceded by the clap or chancres, we may pretty safely conclude that it is a bubo; or if the swelling has begun very small and gradually increased, a similar conclusion may be formed. A bubo is not commonly attended with much danger, unless the subject happens to be of a bad habit of body, when it sometimes runs into a gangrenous ulceration, and spreads to a great extent into the adjoining flesh.

The first object to be attended to in a bubo, is to endeavor to disperse it by cooling lotions, poultices mixed with lead-water, and the application of four or five leeches. Linen pledgets, wetted with lead-water, should be kept on during the day, and poultices during the night. A dose of salts should be taken, daily, and a perspiration excited by the use of warm herb teas. If the swelling has not yet become red and painful, the blue ointment should be rubbed into the inside of the thigh, which, when thoroughly used, will often prevent the tumor from proceeding to suppuration. A little mass of the mercurial ointment, about the size of a walnut, should be rubbed into the part, just under the tumor, every night, until all the hardness and swelling have gone away. If the use of the ointment should occasion any soreness of the mouth, a gargle, made of borax dissolved in warm water, should be employed, three or four times a day, and a small dose of oil, salts, aloes, or some gentle physic, should be taken, each day, to keep the bowels pretty well open.

In the mean time, two grains of the blue pill, or of calomel, should be taken, daily, until the tumor is entirely dispersed, or the abscess healed, or until a coppery taste is perceived in the mouth. If the salivation becomes severe, the ointment should be lessened in quantity, or entirely omitted for a few days.

When the bubo has got to be of such a size that it cannot be dispersed, it should be brought to a head, by the use of warm bread and milk or flax-seed poultices. It should not be allowed to break of itself, but should be opened with a lancet. If opened artificially, it is apt to heal much better. In scrofulous constitutions, buboes are sometimes difficult to heal; the inflammation is apt to spread, and to form ill-conditioned and foul, spongy ulcers. Such ulcers should be cleaned two or three times a day, with a decoction of the wild indigo root; and poultices made of it, mixed with rye meal, should be worn every night. A little calomel or red precipitate, sprinkled upon the ulcer, will often set it to healing. Where it becomes offensive to the smell, powdered charcoal should be scattered over the surface of it. The constitution, at the same time, should be strengthened with quinine, bitters, the mineral acids, and a nourishing diet. Opium is often found of essential benefit.

BUBONOCELE. — This is a rupture of the groin, called inguinal hernia. In this disease, the bowels protrude through the walls of the belly, at a point called the abdominal ring. The larger the opening is, the safer the rupture will prove. When this accident happens, the person should lie immediately upon his back, and endeavor to push the bowels back. It commonly happens in consequence of leaping, falling, lifting, or straining the body in that particular part. See *Rupture*.

BUCKTHORN. — This article is commonly called the purging buckthorn. It is one of the tallest kind of shrubs, growing often to the height of sixteen feet. The berries are chiefly used in medicine. The celebrated Dr. Hewes, formerly of this place, was in the practice of making a barrel of the buckthorn syrup every year. He esteemed it one of the best purgatives which the earth affords. It is a drastic purgative; and, in dropsies, rheumatism, affections of the skin, and suppressions of the monthly secretion, it is, doubtless, a good remedy. Twenty of the fresh berries prove a brisk purgative. The berries have a nauseous, bitter taste, and a disagreeable smell. The buckthorn is attended with nausea, and a disagreeable dryness of the throat and mouth, often with griping.

The syrup of buckthorn is an excellent medicine in the cure of salt-rheum. From one to four tea-spoonfuls of the syrup should be taken, for three days, and omitted for as many more, and then taken again for the same time, and continued for several weeks. The eruption, at the same time, should be anointed daily with Turner's cerate.

The dose for an adult is a drachm of the dried berries, or two drachms steeped in water. The dose for a child two years old is eight grains of the dried berries, or about five of the dried berries steeped in water.

The syrup of buckthorn is formed by boiling two pounds of the juice of the clean berries with one pound of refined sugar, until they are perfectly combined. The dose of the syrup is two table-

spoonfuls for an adult; the dose for a child two years old, one tea-spoonful.

BUGLE WEED—*Lycopus Virginicus*—Is an indigenous herb, with a perennial, creeping root, which grows in shady and wet places, in all parts of the United States. The stem is from twelve to eighteen inches high, obtusely quadrangular, and furnished with opposite sessile leaves, which are broad, lanceolate, somewhat rough, purplish, and beset with glandular dots on their under surface. The flowers appear in August; are minute, white, and in small axillary whorls. The whole herb is medicinal. It has a nauseous, slightly bitter taste, and a peculiar odor, which it imparts to boiling water. "It was introduced into notice by Drs. Pendleton and Rogers, of New York, who obtained favorable effects from its use in incipient phthisis and hemorrhage from the lungs." This was a favorite remedy, in the same affections, with the late Dr. Solomon Drown, of this state, deservedly celebrated for his scientific and practical knowledge of the medicinal plants of this country, and whose authority we consider inferior to none that can be adduced upon subjects of this nature. The bugle weed is mildly narcotic; it diminishes the frequency of the pulse, quiets irritation, allays a disposition to cough, and arrests the hemorrhage. The most convenient form of administering it is that of an infusion; which is prepared by steeping an ounce of the herb in a pint of boiling water. Dose, half a tea-cupful, repeated at short intervals, as the case may require.

BURDOCK.—This plant grows in rich places around the house, and by the road-side. It has a very broad leaf, and produces an abundance of burs, which are apt to stick to the clothes. The seeds have a bitterish, hot taste, and are sometimes given to promote the secretion of urine, in the quantity of a drachm, reduced to powder or made into an emulsion. They have been used in rheumatic, gouty, and venereal disorders, instead of sarsaparilla. The green leaves are thought to be very cooling to the skin. They excite a perspiration in the part to which they are applied, and lessen the heat. The root, made into a syrup, has been highly recommended for a cough. The burdock appears to have something of the nature of the squill. It is laxative, diuretic, sudorific. For this purpose, an ounce of the root should be boiled in a pint of water, and drank at four or five different times.

BURGUNDY PITCH.—This substance comes from Norway. It is the product of the common spruce fir-tree, and is obtained by making incisions into the trunk. The pitch runs out and is collected in vessels made for the purpose. It is boiled in a small quantity of water, strained, and set aside to cool. It soon settles into a resin. When chewed, it excites the saliva. It melts easily by heat, and, spread on leather, makes an excellent plaster for many local affections.

We have great faith in pitch plasters, but to be of service they must be large. The good effects of pitch plasters are lost by making them too small. In the case of a cough, if a plaster is

made large enough to nearly cover the whole chest, or the upper part of the back, it will often be of the greatest service; but if only a little patch is stuck on, it produces no benefit at all. In the lumbago, or rheumatism in the small of the back, a pitch plaster, large enough to cover that part, will often cure the disease. In soreness of the flesh and rheumatic pains, a pitch plaster is almost sure to afford comfort. Pitch is warming, and, when spread upon pieces of leather or cloth, serves to retain the heat of the body. By retaining the heat of diseased parts, we often place them in a condition to heal or recover. A pitch plaster is a good application to the stomachs of children in the whooping cough.

BURNS.—Burns include all injuries produced upon the system by heated bodies, whether by hot water, hot iron, or burning coals. The injury done to the part by scalding water is precisely of the same nature with that which is done by melted iron or a coal fire. Some burns are so slight as to require but little or no attention. Burns which raise a blister, or remove the skin, in general require some kind of medical treatment. Burns do not appear to differ much from lacerated wounds, where the flesh is torn and disorganized by other agents. Fire, or heat, in reality, tears asunder the texture of the flesh, very much as it is torn by a nail, or any other solid body. In slight burns, where the skin is not blistered or peeled off, and the part affected is small in circumference, no fever or constitutional effect is produced; the place looks red, and, for a short time, may be very painful, but the pain soon ceases, and no further inconvenience is felt.

Domestic Remedies.—In slight cases, the application of cold or ice water, scraped potato, or a cold poultice made of sugar of lead water, will be all the local means necessary. In young children, however, which are very liable to be affected with convulsions, it is always best to give them a little paregoric or laudanum. In severer cases, where the place scalded or burned is larger and deeper, and the skin blistered or peeled off, the best thing which can be done is immediately to cover the burn with a soft bread poultice, made simply of white bread and warm water;—rye meal, or flax-seed meal, will answer nearly as well. The poultice should be blood warm, and as soft as it can be made; and renewed as often as it grows at all hard. Its efficacy will mainly depend upon its frequent renewal. Of the thousand remedies which have been recommended for burns, none will be found equal to this; and be the burn ever so large, the whole space should be covered in this way. The solvent power of a bread and water poultice, made without milk, oil, or any other greasy material, is the greatest of any substance which we have ever seen. Oil or grease, spread over a poultice, operates very much like oil or grease applied alone; it chokes up the exhalant vessels, and confines the heat. Fomentation with warm water answers the same intention as a bread poultice, and if it could be constantly applied, day and night, perhaps it would even answer better than a poultice

Fresh wounds, which often have a frightful appearance, people are apt to cover up, and not to uncover them for two or three days, merely because it is painful to look at them. We fear that this kind of timidity has dictated much of the absurd practice which has been followed in the treatment of burns and scalds. Burns about the face, neck, and body, are much more dangerous than they are upon the limbs, especially the feet and the hands. It will be necessary in all large, painful burns, to take opiates immediately. A dose of laudanum, or of morphine, which perhaps is preferable, should be given as often as once in six or eight hours. In children, this recommendation should never be forgotten. When a child has fallen into the fire, or been scalded with a pot of boiling water, or burned by its clothes taking fire, as soon as the burning substances have been removed from its body, a dose of laudanum, paregoric, or morphine, should be the first thing given. Warm water should then be sopped upon the burned place, until a poultice can be made. The patient should be kept comfortably warm, and no more. The drinks should be cool and the diet light. The bowels should be kept open by castor-oil, salts, or some mild physic, and the poultices or fomentations constantly renewed. Linseed oil and cotton, or sweet oil and cotton, are an application much in vogue, but we think the bread and water poultice, or fomentation with pure, warm water, much better. A liniment made of linseed oil and lime-water we think to be preferable to oil and cotton. Some physicians have recommended the application of turpentine, alcohol, and new rum, but they have not been generally adopted. It is thought by many that all local applications ought to be cold; but unless the burn be superficial, the effect of the cold can be of no use in restoring the part to its natural state.

In the course of two or three days after the burn has occurred, the flesh begins to suppurate, or to throw off a large quantity of yellowish matter, which commonly covers the whole surface of the ulcer. Small granulations begin to form, and the healing process commences. In this state of the burn, the poultices may either be continued, or a salve, made of bees-wax and sweet oil, applied to the sore. The calamine ointment or Turner's cerate will sometimes promote the healing better than the simple cerates. If the sore is slow in healing, or if proud flesh forms in it, it may be sprinkled over with burnt alum, calamine powder, or calomel. If a foul ulcer takes place, the sore should be stimulated by sprinkling upon it a little red precipitate. In the worst kind of burns, pieces of dead flesh will separate from the living, and the ulceration extend not only very deep, but very wide, and a high fever and inflammatory symptoms will affect the whole system. In such cases, it will be necessary to give the sweet spirits of nitre, the rochelle powders, and other cooling medicines. The ulcer must be cleansed with a wash of wild indigo root, or a solution of the pyroligneous acid.

If, after two or three days, the inflammation of the burned sur-

face should become great, the pulse forcible, and the thirst and heat of the system much increased, it may be advisable to draw a little blood, although we believe it will seldom be found necessary. Sudorifics of antimony, ipecac., or sal nitre, should be given, until a moisture is excited upon the skin, and the pulse is reduced. The patient should be kept upon a liquid, vegetable diet, and acidulated drinks, such as lemonade, barberry and tamarind water. In some burns, such will be the extent of the injury, that the whole system will appear to be overcome with the violence of the shock. In these cases, after giving an opiate, it will be necessary to administer wine, camphor, ether, and other carminatives and stimulants; this treatment must be pursued until the vital powers recover. The pulse, in bad burns, will generally be small, weak, frequent, and sometimes vibratory. In burns, too, the breathing is apt to be affected more than in other injuries of the body.

It is of the greatest consequence, in deep burns, to assist the closing up of the wound by adhesive plasters. The surrounding skin and flesh should be drawn as near together as the case will admit of, and kept in this state until the new skin has formed. Where the strength of the patient begins to fail, the system must be supported with wine, porter, quinine, and a nourishing diet. If several of the fingers or toes are burned, they should be separated by a piece of linen cloth, spread with simple cerate, to prevent their growing together; and so with the eyelids and nostrils. All those parts which are liable to grow together should be carefully separated. If the knee joint should appear likely to become stiff, the leg should be straightened; and if the elbow joint should appear to be liable to the same accident, the arm should be bent; as it will be more convenient for the leg to be straight, and the arm to be bent, in case they become stiff.

BUTTERNUT.—There is no better domestic purgative, for common use, than the extract of butternut. The extract is made by boiling the unripe fruit, or the inner bark of the butternut, in water, straining the liquor, and then boiling it down, over a slow fire, to the consistence of honey. When the extract cools, it settles into a black, thick mass, suitable to make into pills. It is a mild, easy purgative, and leaves the bowels in a natural state. The ordinary dose of the extract, for a grown person, is from ten to thirty grains. Five or six pills of the common size are a proper dose. A child two years old may take five grains.

The extract of butternut is very suitable for common costiveness, for pregnant women, and dysentery. In the piles, there are few remedies which succeed so well. Mixed with calomel, it is a good remedy for bilious affections. Equal parts of calomel and the extract of butternut are scarcely inferior, as a purgative, to the celebrated dose of calomel and jalap.

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CACHEXIA.—A bad condition of the body, such as exists in the scurvy, scrofula, dropsy, and several other diseases. It is a vitiation of the fluids and solids of the blood and the flesh.

CAJAPUT OIL.—The cajaput is a highly volatile oil, obtained by a distillation of the leaves and fruit of the cajaput tree, which grows in the East Indies. The oil has a green or yellowish color, a fragrant odor, and an extremely hot, pungent taste. It is a highly diffusible stimulant and antispasmodic. It is used in palsy, chronic rheumatism, hysterics, and tympanites or air swellings. It is also applied externally, to relieve violent pains of the head and other parts. In the cure of the toothache, it is a potent remedy. A dossil of lint, charged with two or three drops of it, and placed in the cavity of the tooth, is often found effectual.

Its dose, when taken internally, is three or four drops in a spoonful of water.

CALCINATION.—To convert bodies into powders and oxides, by the application of heat. If a strong heat is applied to lump magnesia, the carbonic acid gas is driven off, and the substance is reduced to a fine white powder, called calcined magnesia. A piece of limestone, treated in the same way, becomes quick lime. Iron, when reduced to a cinder, is *calcined*, or converted into an oxide or rust. If bones are burned in a hot fire, they are converted into lime and phosphoric acid. The acid flies off, and the lime remains in the fire.

CALAMINE—Carbonate of Zinc.—This is a natural ore, found in Wales, and several parts of Europe. It is of a dark-red color, heavy, moderately hard, and brittle. That which is obtained in the British Isle, is allowed, by the best judges, to be superior to that of most other countries. It is a native carbonate of zinc. It is found to be a valuable article of medicine. It is purified by roasting it. In its native state, it is combined with a small portion of arsenic and sulphur. It comes to us in the shape of a reddish-colored powder. Combined with simple cerate, it forms the celebrated Turner's cerate, one of the best ointments in use for the piles, and several eruptions of the skin. Dissolved in rose-water, it makes an excellent wash for inflamed and sore eyes. It is astringent and cooling. The ointment made of it is an excellent application to inflamed surfaces, and burnt or excoriated flesh.

CALOMEL—Sub-muriate of Mercury.—This substance, the dread of some, and the admiration of others, is made of quicksilver and the marine acid. The marine acid is obtained from common salt, and the quicksilver is found a native ore in the earth. When prepared for use, it is called sub-muriate of mercury, because an extra quantity of mercury is added to the muriate of mercury. Calomel is a yellowish white powder, and

is mildly corrosive when applied to the denuded surface in a sufficient quantity. Properly used, it is one of the most healing substances which has ever been invented or discovered. Its healing virtues may easily be discovered by applying it to an unhealthy sore or ulcer, or to almost any eruption upon the skin. Its essential operation appears to consist in promoting or increasing the secretions. It increases the secretion of the saliva to a very extraordinary degree, and where it produces no ulceration of the throat and mouth, it creates no fever. Nor does it quicken the circulation of the blood. Whether it increases all the other secretions in as great a degree as that of the saliva, it is difficult to determine. The secretions of the bowels and liver are evidently very much increased; and probably that of the skin and of the kidneys are both increased at the same time. It is pretty well determined that the secretion of mucus in the lungs and windpipe is increased whenever the salivary glands are quickened.

When calomel is given in the small dose of one grain, night and morning, for several days in succession, a coppery, metallic taste is felt in the mouth, and if continued beyond this it will produce redness and swelling of the gums and fauces, soreness, and finally white canker spots. Its efficacy as a medicine consists in such a use of it as to produce salivation without inflammation and soreness of the mouth. If skilfully and adroitly used, it is a charming medicine; but if misapplied and unskilfully used, it may do injury. The fear and disapprobation of it, which have lately been generated in the public mind, are entirely groundless. We have on our tables every day, and use with great freedom, a condiment which possesses nearly as active and dangerous properties as calomel,—we mean common salt, or the muriate of soda,—and yet nobody exclaims against the abuse of salt. Calomel is a choice remedy, but it requires a nice sagacity and close observation to know how and when to use it.

In a dose of eight or ten grains, it operates as a purgative, and, often, in a much smaller dose.

In affections of the skin, in the venereal disease, in the liver complaint, in many chronic inflammatory diseases, and in fevers, it is employed to create a new condition of the system, and, thereby, to shorten or cure the disease. We have every reason to suppose, that, if its action can be extended to the internal organs, and we know that it can to the throat, stomach, and the remaining part of the alimentary canal, it will operate in the same way as when applied to ulcerations and sores upon the surface of the body. But the difficulty lies in giving the right quantity of the medicine, when the disease for which we give it is out of sight. If we never carry the effect of the medicine beyond a slight increase of the saliva, or a coppery, metallic taste in the mouth, we shall never do harm, and may often produce the happiest results.

At one time, calomel came well nigh being esteemed a cure for all diseases, and was given with a culpable degree of freedom.

Nothing short of a very sore mouth was a signal to discontinue the use of it. It was seldom weighed, and nothing but the eye determined the quantity for a dose. Such an abuse of the best remedy which has ever been discovered, would ultimately bring it into disrepute.

Calomel is very diffusible. Introduced into any part of the system, its effect is soon communicated to every other part. Taken into the mouth, the substance itself has been transmitted through the skin.

As a purgative, in many instances, it has no superior. There are many cases, especially among children, where no other substance can be made to stay upon the stomach. The mere weight or gravity of calomel will often retain it when everything else will be thrown up.

The ordinary dose, when used to change the condition of the system, is, for an adult, one grain, dispensed twice a day. In chronic diseases, and in many acute affections, we believe the dose should be limited to half a grain, once or twice a day. It may take a little more time to excite the secretions, but its effects will be better regulated and its corrosive operation more certainly avoided.

A thousand evils have been laid to this medicine which it never produced. Many of the ordinary consequences of a fever, for instance, we have often heard attributed to the use of calomel, such as the loosening, decay, and loss of the teeth, an increased tenderness of the system, and a greater disposition to take cold. In the venereal disease the medicine is used in the same way, and with even more freedom, without the production of any such effects. During the dispensation of the medicine the gums will often be red, tender, and sore, but the teeth, we believe, are very seldom affected.

Calomel is used as an alterative, as a purgative, as an ointment, and as an external application to sores and ulcers. As a purgative, for a child between one and three years old, the dose should be from three to five grains.

Calomel is used in combination with other purgatives, such as jalap, rhubarb, aloes, and butternut. After taking several doses of it, it is always best to follow it with a dose of castor-oil, salts, or an infusion of senna and manna.

CAMPHOR.—This substance is a transparent, hard gum, obtained from a tree which grows in the island of Japan. It exists in the wood of the roots and branches of the camphor tree in distinct grains. The grains of camphor are found lodged in great abundance in all the vacant places in the tree. The gum is procured by distillation in an impure state, and undergoes another purification after it is transported to Europe. The roots of zedoary, thyme, rosemary, and marjoram, afford camphor by distillation. It is also extracted from many other shrubs and plants. It is a proximate principle of vegetables.

Camphor has a strong, invigorating smell, and an acrid, hot

taste. It is exceedingly volatile, and soon loses its virtues when exposed to the air. It has an unctuous feeling, and burns with a very white flame. Water will not dissolve it, but it is very soluble in alcohol or rum. It comes to us in large, thick plates. Moistened with alcohol or rum, it can be reduced to a powder by grinding it in a mortar.

It is used in the form of mixture or emulsion, tincture, and liniment. The emulsion is the most pleasant form of using it, but the spirit is the most common form. The spirit, or tincture, is made by adding an ounce of camphor to a pint of alcohol or rum.

The emulsion is made by triturating one part of camphor with three parts, by weight, of almonds, in a mortar, and afterwards adding gradually the water.

Camphor is very vivifying. Even the smell of it will relieve faintness, and when taken into the stomach, in the dose of eight or ten grains, it has still more effect in restoring the powers of life. It is a diffusible stimulant, carminative, and sedative. In spasms, convulsions, hysterics, and nervous affections, camphor is a powerful sedative. In these diseases, it should be given in a dose of fifteen grains, every three or four hours. Some physicians give it in still larger doses. In small doses it has but little effect. Camphor is given in typhus fever, and in all diseases of debility, to support the powers of life. Taken in the ordinary dose of ten grains, repeated every two or three hours, it will cure the most obstinate headache. The tincture of camphor is an excellent external application in pains and soreness of the flesh and bones. Applied to an inflammation upon the surface of the body, it will resolve it, in many instances, better than any other medicine.

The dose of the gum, for a child between one and three years old, is from two to five grains. A dose of the spirits, or tincture, from ten to fifteen drops.

The spirit of camphor is an antiseptic. It has a strong tendency to check mortification, both as a local application and an internal remedy. It will relieve strangury of the water produced by blisters, and produce sleep in cases of violent pain and nervous distress. It moderates the pulse, increases the perspiration, and composes the mind. In healing many sores, and in rheumatic complaints and sprains, it is exceedingly balsamic.

CANCER.—A cancer is a painful eating ulcer. Instead of thick, yellow matter, it discharges a thin, watery, acrid fluid. The edges of the sore are generally hard, thickened, and extremely painful. The flesh which surrounds the ulcer will often present the appearance of the teeth of a saw. A cancerous sore, or ulcer, is commonly attended with a fetid and offensive smell, and a disgusting appearance. It proceeds, in general, from scirrhus tumors, warts, and other hardened swellings and pimples. The scirrhus, from which it commonly proceeds, is a hard, irregular lump, which forms under the skin, in the breasts of women, and

in the lips, testes, and cheeks of both men and women. Any part of the body may be the seat of cancer, although the glandular parts are the most subject to it. In men, it most commonly attacks the lips, face, tongue, palate and testes; in women, the breasts and the womb; and in children, it attacks the eyes. Cancer is, for the most part, a disease of the old; the young are rarely affected with it; seldom, if ever, does it make its appearance before the age of twenty-five. When a scirrhus tumor upon the breasts, for instance, is attended with a burning, shooting pain, and the skin over it has become dusky, purple, or livid, it has become a confirmed cancer. The tumor sometimes grows to a large size; it has an irregular, knotty appearance, the nipple sinks in, and there are seen purple veins running in every direction over it. Any little wart or pimple on the face or other parts of the body, on becoming irritated, at particular periods of life, and in a particular state of the body, may become a cancer. Scirrhus tumors do not always become cancerous; they will often lie dormant during the whole life of the person.

Just before a scirrhus tumor breaks out into an open cancer, the skin around it will become contracted and wrinkled, and its surface will have a black and blue appearance. After it becomes an open sore, and a thin, watery, eating fluid begins to run from it, the proud flesh will rise up above the skin, and often grow into large excrescences. The raw surface will often bleed and look exceedingly angry. The pain at the same time increases, and the patient grows thin. In some cancers, particularly of the breasts, nearly all the glands of the body will become affected. The skin and muscles, for a considerable distance around the cancer, will become hard, stiff, and contracted. The axillary glands and the arms will swell and become stiff and hard, and the whole body will partake of the disease. Sometimes there will be sickness at the stomach and a total loss of appetite, and at other times the appetite will become ravenous. In some, the progress of the disease is rapid, and in others, exceedingly slow.

Remedies.—Almost the only hope of a cure in this disease is found in having it removed by the knife. This, in cancers of the lips, tongue, and face, will often effect a cure; but in the breasts and other large glands the operation is not so successful. The operation will, however, often delay their progress for a long time. The pain must be relieved by opium or laudanum. Laudanum poultices will often produce perfect relief from the pain; a watery solution of opium is however better than laudanum for this purpose. The cicuta and the belladonna will often accomplish the same or a better purpose. The best external applications are carrot poultices, decoctions of hemlock, powdered charcoal, yeast poultices, creosote, pyroligneous acid, a solution of arsenic, weak solutions of the chlorides of lime or soda, a watery solution of opium, liquid tar, and washes of sugar of lead and the sulphate of zinc. We have always found the powdered charcoal,

strewed on once a day, and washed off with rain-water, to be the best dressing we have ever employed. It keeps the ulcer sweet and clean, and neutralizes the acrimonious discharge.

Cancers are sometimes extirpated by the actual cautery, and by caustic potash, lunar caustic, the mineral acids, verdigris, red precipitate, and blue vitriol. One of the best caustics in use is composed of one ounce of corrosive sublimate, one third of an ounce of opium powdered, and sulphuric acid enough to make it into a thin paste. A small quantity to be applied once or twice.

A vegetable diet and a strictly temperate life will tend greatly to delay the progress of the disease. The most essential change which can be produced in the constitution is by a change of the aliment. Every alimentary article which aggravates inflammation, in general, will aggravate the condition of a cancer; and, on the contrary, every species of food which resolves and abates inflammation, will ameliorate the condition of a cancer. All salt food, and stimulating things of every kind, aggravate the disease. In a word, the drink should be water, and the aliment, fresh and wholesome vegetables.

It is of the greatest importance that all hard and warty tumors upon the body, and especially upon the face and neck, should not be cut or wounded in any way. Many a little hard bunch under the skin, by irritating it, has become a cancer, when, if it had been left alone, it would have lain dormant for life. Warts, and other hard and knotty growths upon the face and other parts, whenever they become unsightly, should be covered constantly with a plaster of white diachylon, or, which is better, the lead plaster known by the name of Lord Noel's leaden plaster, it having once cured that nobleman of a cancerous tumor. In shaving, particular care should always be taken not to wound a warty, hard excrescence.

The rose cancer, or *fungus hematodes*, assumes a variety of forms, and attacks all those parts which are the seat of the true cancer. In the commencement of it, it is only a soft tumor or swelling of a part, very elastic to the feel and often very painful. When it ulcerates it spreads out into a form which resembles a red rose, rises considerably above the surrounding surface, and presents a large mass of bloody fungus or sponge-like substance. It is very apt to bleed, and always presents an unsightly appearance. The same remedies which are employed in the treatment of the true cancer are employed in the cure of this. We believe the charcoal, in a fine, impalpable powder, strewed over it every day after it ulcerates, is the best application which can be made to it. It should be often washed with warm rain-water, and if ointments are used for dressings, they should be of the mildest and most simple kind. When a cancer bleeds excessively, the bleeding should be restrained by the liquor or sugar of lead, or a powder of the same. Alum, sulphate of zinc, and creosote, all have a similar effect. Sometimes the application of lint will be sufficient to check the hemorrhage. A removal of this distemper

by the knife, in its early stage, is the only remedy upon which reliance can be placed. Other means are often tried, but the highest and most reliable medical authority decides in favor of the extirpation of the disease by the knife. The host of cancer remedies, which are vended under different names, are, in general, the inventions of extremely weak and ignorant people, with whom observation and experience are never a guide.

CANINE MADNESS—Hydrophobia.—The dog, when he first begins to show signs of madness, is stupid, surly, and snappish. He looks dull, hangs his head and tail, and eats nothing for several days. He then begins to pant, breathe short and laboriously, and to loll his tongue. He froths at the mouth, runs about from distress, and bites at everybody that comes in his way. He often leaves home, and runs off for many miles. He becomes more furious the longer the disease is upon him, and his bite grows more infectious. It was formerly supposed that every animal which he bit became mad, but this is ascertained not to be the case. It is only man and the dog kind that appear very liable to take the infection by the bite.

After a person has been bitten by a mad dog, it is generally thirty or forty days before he becomes affected with the disease. The bitten part first becomes painful, and then the whole system begins to be affected. The person is uneasy and listless, cannot sleep, sighs, and wants to be left alone. The bitten part becomes hard and elevated, and pains begin to shoot from it along up to the throat. There is a constant sensation of choking, and the greatest horror at the sight of water, probably on account of some difficulty in swallowing a liquid substance. The patient can swallow solid food, but no liquids. Spasms and tremors agitate the whole system. He is thirsty, but cannot drink. He starts back at the very name of water.

When a person has been bitten by a mad dog, the part bitten should be immediately cut out. The treatment of this disease, when it has commenced, is somewhat obscure, as no one remedy has ever been found to afford much relief, much less a cure. We should say that leeches applied to the throat, succeeded by bread poultices mixed with laudanum, were the best topical means which could be used. After being bitten, Dr. Cullen recommends immediate salivation with mercury, as the best hope of neutralizing the poison in the blood, before it affects the system. Large doses of opium and the warm bath should be used after the madness has commenced. Musk, camphor, and castor, in this, as in other spasmodic diseases, will be proper. Arsenic has been said to be efficacious in the cure of canine madness. Various other medicines have been said to cure the disease, but they have not been found so on a second trial. It is said that a person affected with hydrophobia rarely, if ever, loses his senses, but continues, the whole time he lives, to know and to talk as well as usual. It is very fortunate that this is a rare disease. The terror of having it is altogether out of proportion to the danger of taking it. In

the city of Providence, which now contains thirty thousand inhabitants, there never has been but one case, and that happened about fifty years ago; and we presume that the hydrophobia does not occur oftener, in proportion to the number of inhabitants, in other places. The actual danger, therefore, of having the hydrophobia, is not a twentieth part so great as of being struck with lightning, about which people have, comparatively, but very little concern.

In conclusion, we will repeat the precaution of having the bitten part removed by the knife as soon as possible after the accident has happened; and where it is impossible to have this done, to have the blood sucked out by the mouth or cupping glasses; to wash the bite thoroughly with warm water, or salt and water; and, afterwards, to apply two or three leeches every day, for five or six days in succession.

CANKER—Thrush, Aphthae, Stomatitis.—Notwithstanding the very prevalent use of the word canker in New England, the term is seldom used by medical authors. We are not aware that it is met with in this sense in European works, either ancient or modern. Thrush is the term by which this class of diseases of the mucous membranes is most extensively and generally designated. This want of uniformity in the use of these terms has given rise to some confusion in popular medical language. It is not unusual for a physician practising here, who has studied his profession abroad, to be sadly at a loss to understand his patients when they ask him the very common question, "Haven't I got the canker?" or, "What is good for the canker?" It is a term which is in everybody's mouth, but nobody can define it; and we may venture to say that there are few, if any, subjects connected with the medical art, upon which the views of medical men even are more vague and indefinite than that under consideration. It is by individual experience only that the physician makes himself familiar with canker as it prevails in New England.

There are several varieties of this disease, all of which have some symptoms in common, but which differ considerably in others, and in the circumstances under which they are developed. They are all vesicular in their forming stage, bearing a resemblance to vesicular diseases of the skin; they affect the same membranes or textures, and are prone to run into superficial ulcerations after the rupture of the vesicles; but the length of time which they run, the conditions of the system giving rise to them, their prognosis, etc., differ sufficiently to entitle them to the character of distinct varieties, requiring corresponding modifications in the treatment. In order, however, to present the subject in as clear and practical a view as the present state of our knowledge will permit, it will be necessary to consider the most common and important varieties separately.

VARIETY FIRST. Canker of Infants, Aphthae Infantum.—This affection is peculiar to early infancy. It is commonly called baby's

sore mouth. It generally makes its appearance in the course of the second or third week. The eruption appears first on the under lip and angles of the mouth in very minute, roundish vesicles, or blisters, which soon become very numerous, spread, and often run together so as to cover the whole lining surface of the mouth with a whitish crust. In the course of a few days these little vesicles burst, or the fluid which they contain is absorbed, and the delicate membrane, called the epithelium, which covers them, is broken up and loosened. The mouth and tongue at this time have the appearance of being covered with a thin layer of curdled milk. When the disease is severe, this crust is of a brownish color, and extends over every part of the mouth and throat. In the course of a few days this curdly, and often stringy, matter is completely separated and cast off, leaving the mouth and tongue somewhat redder than natural, but it is usual for two or three successive crops of the eruption to come on and run through a similar course before the child entirely recovers. The child slavers and is embarrassed in sucking; it betrays signs of pain and general indisposition. This disease extends to the stomach and bowels; the discharges are acrid and greenish, and the breech is excoriated. Previous to the appearance of the eruption, the stomach and bowels are more or less deranged, and a disposition to sleep is so constant a premonitory symptom that nurses frequently observe "that the child is sleeping for a sore mouth." As to the cause of this disease but little is known; it comes on spontaneously, like many other diseases of children, and probably affects the same child but once. There is no evidence that it is contagious. The eruption, or efflorescence, perhaps, is symptomatic of a constitutional affection peculiar to this period of life, and bears the same relation to it that the eruption in measles and chicken pox does to those disorders. It may be an effort of nature to throw off some morbid matter, the nature of which is not known.

Remedies.—Like many other diseases, especially the eruptive, this disease appears to be self-limited, and not sufficiently under the control of medicine to prevent it from running a determinate course, though something may be done to palliate the most distressing symptoms. A consideration of the first importance in every stage of the complaint is the state of the stomach and bowels, a deranged condition of which constitutes one of its most essential characters. Should the bowels be costive, or the discharges green or otherwise unnatural, minute doses of calcined magnesia, super-carbonate of soda and rhubarb, castor-oil, sweet oil, or some other mild physic, should be given every day or two, until the bowels are corrected. Physicians often give for this purpose very minute doses of calomel and prepared chalk, and calomel and rhubarb, with excellent effect. After these have had a moderate operation, and all offensive and irritating matters have been removed, should the bowels be loose and griped, the chalk mixture will be found one of the best remedies. The super-

carbonate of soda in a weak infusion of anise-seed or catmint, with or without the addition of a drop or two of paregoric, as the case may require, is a valuable medicine in correcting the discharges and quieting the child. A great variety of local applications is in repute, both among physicians and nurses, a very few of which are of the least possible advantage; in fact, it is a matter of doubt whether the great proportion of them are not decidedly injurious. To hurry off the sloughs by harsh astringents and stimulants, as is frequently done, will do nothing towards bringing the disease to a crisis; and by leaving the parts naked and exquisitely sensitive, the sufferings of the child will be aggravated, and another crop of the eruption will be more likely to be produced than if the case had been left to nature. In the early stage of the disease the only local applications necessary are the mucilages of gum-arabic, flax-seed, or slippery-elm; these, by being frequently applied, will have a soothing effect, and make the little patient more comfortable while kind nature is curing the disease.

In the second stage, some mild astringents may be serviceable in promoting a healthy action in the diseased membrane, and restoring it to its natural condition. Among those best adapted to this purpose are a weak solution of borax or alum, in water sweetened with honey or molasses; infusion of red raspberry or rose leaves, or a weak decoction of marsh rosemary or sage willow roots. Small quantities of these may be applied by means of a small, soft swab, or tipped into the mouth with a tea-spoon. If an unnecessarily large quantity is not used, no danger will arise from swallowing either of the above medicines.

CANKER OF NURSING WOMEN—*Aphtha Lactea*.—**VARIETY SECOND.** The technical term, *aphtha lactea*, has, by some authors, been applied to the first variety, the canker of infants, but as that disease attacks those infants that do not nurse, as well as those that enjoy this inestimable privilege, it is evidently a misapplication of the term, and we have ventured, without authority, to apply it to this variety. It is true, indeed, that the canker of nursing women may be perpetuated after the secretion of milk has ceased; but it will, we think, be admitted by every one at all conversant with the subject, that it invariably makes its first appearance when the system is in a condition to furnish this secretion, that is, while the woman is nursing, or in the latter months of pregnancy. Admitting this, and the well established fact, that to put a stop to this secretion by weaning is the surest, and sometimes the only remedy for the disease, the conclusion is unavoidable that this condition of the system is necessary to its development, and, therefore, that the term is appropriate in this sense. Having had occasion, several years since, to examine the standard medical authorities upon this subject, in the preparation of a dissertation read before the Medical Society of this State, we found that this variety was not distinctly referred to by any one to which we had access. This circumstance, and the fact, that, according to our observations, this disease has been gradually growing more

prevalent in the course of the last twenty-five years, have led to the inference, that it is of comparatively modern origin. If it has always, or for a long time, existed, it must have been limited to certain countries or climates, and unaccountably have escaped that close observation and investigation which have been bestowed upon most other diseases, and have been confounded with other forms of the disease, — a supposition that is hardly admissible.

The duration of this kind of canker is unlimited; a cure seldom taking place spontaneously, except after weaning. Its tendency is to undermine the constitution; and if allowed to go on a great length of time, and a diarrhœa supervene, a state of disease and consequent emaciation and exhaustion will be induced that will defy all remedies. Though ordinarily confined to the mouth, stomach, and intestinal canal, every portion of the mucous membrane is obnoxious to its attacks. The windpipe, lungs, vagina, urethra, are sometimes affected by it. When the windpipe is affected, it is accompanied with a very troublesome, strangling cough. The first symptom that is observed, in many cases, is a burning sensation in the œsophagus or stomach after taking hot or acrid drinks and food. This symptom often increases in severity, so that, in a short time, the mildest liquids and food produce uneasiness and pain. In the mean time, the mouth and throat become more or less thickly covered with small, white vesicles or blisters, having hard and inflamed bases, which soon burst, leaving circumscribed, superficial ulcers, with inflamed edges. These ulcers are exquisitely sensitive, and sometimes painful. Their number varies exceedingly, there being in some cases not more than two or three; but in others, the mouth, tongue, and throat are almost entirely covered by them, and the inflammation and swelling are so great, that the whole face has a bloated appearance. There is an unusual secretion of saliva and acrid fluids into the mouth, causing a constant desire to hawk and spit, or to swallow, either of which is an extremely painful operation. The taste is depraved, and the appetite impaired. Though the above is the ordinary course of the disease, there is no certainty as to the part that will first be affected. When the mouth is first attacked it often creeps down into the stomach or lungs; and its presence may be suspected in the bowels when there is unusual tenderness and a disordered condition of those organs. When the urinary organs are affected, there is a frequent desire to urinate, which is attended with a scalding pain, and smarting, and it probably often produces the disease called pruritus. Mild cases will sometimes run on for weeks or months until the child is weaned, as a matter of course, without producing any serious consequences; but in those that are more severe, the painful and disordered state of the mouth and stomach prevent a sufficient quantity of food from being taken and digested to sustain the system, emaciation goes on rapidly, an irritative fever ensues, a diarrhœa sets in, and the patient is exhausted by sleepless nights

and comfortless days. Notwithstanding, however, the inroads made upon the mother's constitution, the child may thrive as well as it would at the breast of the most healthy woman—showing that the milk is not deteriorated by the disease, but, rather, that this secretion abstracts from the blood its nutritious and conservative properties. Like most diseases to which the human body is subject, this puts on a considerable variety of appearances. The ulcerations, though usually distinct and circumscribed, are by no means uniformly so. We frequently see the mouth and tongue of a uniform, glossy, red color, resembling what is observed in some cases of typhus fever, without any appearance of ulceration, or any previous blistering having been observed.

Remedies.—As we have no standard authority to which to refer upon the subject of the treatment of this form of canker, every physician treats it according to his own views of its nature; and, as would be expected under these circumstances, perhaps there are no two who treat it exactly alike. The plan of treatment here recommended is founded principally upon personal experience, and partly upon the suggestions of others, and it is believed to be the most successful heretofore proposed. In some cases in which the secretions are acrid, and the stomach disordered, a gentle emetic of ipecac., white vitriol, alum, lobelia, or thoroughwort, will have a beneficial effect in restoring a healthy action to the stomach; it will afford temporary relief and prepare the system for other remedies. The emetic may be repeated from time to time, if the case prove obstinate. After the operation of the emetic,—should it be thought necessary to give one,—small doses of rhubarb and super-carbonate of soda or calcined magnesia should be given two or three times a day, in molasses or honey. Small doses, of six or eight grains each, of the soda and rhubarb, repeated several times a day, are preferable to larger doses less frequently repeated, as this medicine appears to have a favorable effect as a local application to the diseased surfaces, as well as in correcting the stomach and bowels. Active purgatives, and especially senna, are unnecessary and injurious, but the doses of the rhubarb and soda may be increased if the bowels continue costive, or a small dose of castor-oil, or some other mild cathartic, occasionally administered. An infusion of red raspberry or rose leaves, or a decoction of blackberry roots, may be taken as freely as common drinks.

Where the mouth is very raw and sensitive, the patient will derive great comfort from the free use of gum-water, mucilage of slippery-elm, flax-seed, &c.; by forming a kind of coating, they protect the inflamed parts from the contact of the air and other irritants, and thereby contribute to the cure.

An important indication in the treatment of this disease is to promote cicatrization or healing of the diseased surfaces, and thus restore the membranes to their natural, healthy action. For this purpose, perhaps, there is no medicine equal to the creosote. We have given this article, in this complaint and others, somewhat

extensively, for many years, and, notwithstanding the popular opinion to the contrary, believe it to be a perfectly safe medicine when given in a proper manner. The use of it is not incompatible with the course above prescribed. In order to obtain the best effects from creosote, it should be mixed, in its undiluted state, with a thick mucilage of gum-arabic and loaf-sugar, in the proportion of twelve drops to the ounce; of this, a dessert-spoonful is to be taken three or four times a day. It should be held in the mouth for a moment, in such a manner as to come in contact with the ulcerated surfaces, and then swallowed. The burning occasioned by it may be rather severe for a few minutes, but for this the patient is fully compensated by the easing and soothing effects which almost immediately follow. The lunar caustic, nitrate of silver, is another medicine of inestimable value for this purpose. In cases of long standing, and especially if there be diarrhœa, we know of no substitute for it. The form in which we have usually given it is that of pills, composed of one third of a grain of the caustic, one and a half grains of rhubarb, and three fourths of a grain of opium; one of these pills may be taken three or four times a day; and the good effects will be increased, when the mouth is very sore, by allowing some of them to partially dissolve in the mouth before being swallowed. This substance may be used in solution, either by itself or with the addition of a few drops of laudanum to each dose, both as a local application and a general remedy. Among the many other medicines that have been tried in these cases, the one, perhaps, the most worthy of notice, is a very weak preparation of the chloride of soda. The dose of this medicine is from fifteen to twenty-five drops in a cupful of water, repeated several times a day. When used as a local application only to the mouth and throat, the same quantity may be put into half of the above quantity of water. By frequently washing the mouth with this, the condition of the ulcers will generally be improved in a few days. White vitriol, alum, borax, marsh rosemary, tannin, gold thread, green tea, and various other astringents, are in popular use as local applications, and may occasionally be beneficial; and, as they are harmless in their nature, should be tried when the remedies heretofore recommended are not successful or cannot be readily obtained. The diet should be easy of digestion, nutritious, and free from all irritating qualities. The best articles are rice, buckwheat, rye, tapioca, arrowroot, soda crackers, &c. If any meat be eaten, that which is tender and free from oil, and not highly seasoned, should be preferred.

Exercise in the open air, travelling, and such other means as are calculated to improve the general health and strength of the system, will materially aid the good effects of medicines. We believe this kind of canker curable, in a great proportion of cases, by a well regulated course of treatment, without weaning the child prematurely; but should all other means fail, and the woman's constitution appear to be suffering irreparable injury,

this measure must be adopted. After removing the cause, the disease will yield much more readily to remedies, or will be cured spontaneously, if it have not been permitted to run so long as to destroy the constitution.

VARIETY THIRD.—Common Canker—Aphtha Communis—Aphtha Acuta—(Inflammatory Canker.)—Nothing is more common than for persons of all ages, and both sexes, to be troubled with solitary ulcers upon the tongue, inside of the lips and cheeks, which remain a few days, and then disappear spontaneously, without any notable derangement of the general health. These ulcers are preceded by small vesicles, or blisters, which, not being very sensitive, are unobserved until they break, and ulceration begins. Ordinarily, this affection is of but little importance, requiring no other treatment than the application of a little alum, borax, white or blue vitriol, or lunar caustic; but it sometimes happens, especially with children, during the first and second dentition, that the ulcerations are extensive, and the inflammation is so great as to produce a very troublesome disease. There is considerable swelling, exquisite tenderness, preventing any kind of food from being taken; the breath is offensive, and the mouth filled with saliva, which is constantly running out for the want of ability to dispose of it in the ordinary manner.

Remedies.—As a disordered state of the stomach is probably the most frequent cause of this affection, it will be proper to commence the treatment with an emetic of ipecac. or white vitriol, and after this to give a dose of rhubarb and calcined magnesia, or Epsom salts, every day or two, until the inflammation is subdued. Should it be suspected that the irritation of worms is the cause, a dose of pink-root, or worm-seed, may be administered in conjunction with the above medicines. When occurring during dentition, and attended with a disordered state of the bowels, as is often the case after the operation of a dose of rhubarb and magnesia, the chalk mixture, with the addition of a few drops of laudanum, will be found a valuable remedy. While there is much inflammation, and the mouth very sensitive, the best local applications are the mucilages of gum-arabic, slippery-elm, and flax-seed; but after the tenderness has subsided in some measure, the ulcerated surfaces may be touched with a solution of lunar caustic, or blue vitriol, and a wash or gargle of white vitriol, alum, borax, chloride of soda, green tea, or some of the astringents recommended in the other varieties, be frequently used. The greatest attention should be paid to the diet, as improprieties in diet are undoubtedly one of the principal causes which produce in the system a predisposition to the disease. If the child nurse, it should not be fed at all; and if it have been weaned, only the mildest kinds of farinaceous food should be given. This form of thrush is said sometimes to prevail epidemically among children, “and has also been known to rage in hospitals devoted to young children.”

FOURTH VARIETY.—Chronic Canker—Chronic Thrush—Aphtha Chronica.—The term chronic thrush has been used not only to

designate the variety of canker here intended to be treated of, but several other varieties, though there is no one from which it does not essentially differ in some of its characters. This is always the concomitant or consequence of some chronic disease which is undermining the general health, and the almost certain tendency of which is, sooner or later, to destroy the life of the patient. It is sometimes difficult to determine which is the primary affection, the thrush or the concomitant disease. We witnessed a case of this kind several years ago, in a gentleman who had died of chronic diarrhœa of many years standing. Upon examination, the lining membrane of the duodenum, second stomach, which was enormously enlarged, and other portions of the alimentary canal, were found almost entirely destroyed by ulcerations. The body was extremely emaciated, and death had undoubtedly been caused by the destruction of the membrane having prevented a sufficient quantity of nutriment from being taken up by the lacteals, and conveyed into the blood, to sustain life; but which was the primary disease, the canker or diarrhœa, could not be determined.

Every portion of the mucous membrane is liable to be attacked by this harbinger of death; but the attention is generally first attracted to it by its appearance in the mouth,—numerous small vesicles or blisters, at first distinct, but afterwards coalescing, covering, in some instances, the entire surface of the mouth and throat. In the course of a few days these vesicles rupture, and the broken and loosened membrane which covered them gives to the parts affected the appearance of being covered with a ragged layer of curdy matter. After a short time this matter sloughs off, leaving the parts naked and of a deep flesh-color, and is again and again reproduced in the same manner. Generally speaking, the sensibility of the mouth, in this state, is not as great as might be expected, as it frequently happens that the patient can take any kind of food or drink without inconvenience from this cause, though the reverse of this is sometimes the case. The appearances of the disease are by no means uniform; it varies in its symptoms and severity. It sometimes comes on suddenly, and at others slowly and insidiously. Sometimes it makes its appearance but a few days before death, and at others many weeks or months. All chronic diseases are liable to, and, in fact, generally are attended with, this kind of parasitic affection, in their last stage. Consumption, diseases of the liver, kidneys, heart, and especially chronic diseases of the bowels, seldom terminate before this dread omen shows itself. It were vain to attempt the cure of this form of canker except we could cure the disease upon which it depends; but it may be palliated, and the patient rendered more comfortable, by the use of the same means that have been recommended in the other varieties.

CANKER RASH—Scarlet Fever.—See *Scarlet Fever*.

CAPILLARY VESSELS.—Small, hair-like vessels, which terminate the arteries and veins.

CARBON—Charcoal.—To obtain carbon pure, wood should be charred in an iron retort; but pure charcoal, burned in a pit, if dry, and procured from maple, oak, birch, alder, or chestnut wood, will answer for medical purposes. Taken internally, in a fine powder, it checks putrefaction of the stomach, bowels, and of the solids and fluids generally. Dose, a table-spoonful.

CARBONATE.—A salt, formed by the combination of carbonic acid with alkalies, earths, and metals. In union with potash, the carbonic acid forms saleratus, or the carbonate of potash; in union with iron, the carbonate of iron; with the earth called barytes, it forms carbonate of barytes. Chalk is the carbonate of lime, and the salts of hartshorn the carbonate of ammonia.

CARBONIC ACID.—This acid is commonly observed in the form of gas. It can be made by burning charcoal. It is a combination of charcoal and the oxygen of the air. No animal can breathe this gas, nor will it support combustion. The most common way of making this gas, or acid, is to pour oil of vitriol upon pounded marble. The oil of vitriol unites with one part of the marble, and forms a new substance, called sulphate of lime, and the carbonic acid gas, which composes the other part of the marble, flies off, and may be caught in bottles or glass receivers. Water absorbs this gas, which makes it slightly sour. In this state it is sold in soda fountains, mixed with lemon syrup, and syrups of various other fruits. In soda-water, beer, and champagne wine, it is the escape of this gas that produces the foaming. This gas, although so obnoxious to the lungs, is friendly to the stomach. Like the other acids, it is cooling, tonic, and febrifuge. In cases of mortification of the bowels, it is an object to administer as much of it as possible, as it is a great corrector of putrefaction. The carbonic acid gas is contained in yeast and emptings; and in this form is often given in those diseases which tend to putrescency. The soda and Rochelle powders let loose abundance of it. In marble, and many other solid substances, this gas or air exists in a solid state, but expands into air as soon as the substance with which it is united combines with some other element. The other element which composes marble is lime; hence, when the oil of vitriol is poured upon it, the vitriolic acid combines with the lime, and forms the plaster of paris.

CARBUNCLE—Black Boil—Anthrax.—A carbuncle is a hard, painful, dark-red, oval tumor, resembling a common boil. It is preceded by a pain in the part where it is about to take place, and a swelling of considerable hardness. The surface soon assumes a livid redness, and a spongy feel; a white discharge takes place through a number of little orifices, formed in the tubercle; a black core appears in the centre; and a fetid smell gives intimations of dead matter beneath the surface. The discharge resembles whey with atoms of curd in it.

There is considerable commotion of the whole system, prostration of strength; sickness; loathing of food; headache; and other

symptoms, of a low, febrile character. In the worst cases, there is syncope, delirium, and extreme anxiety.

Carbuncles most commonly appear on the face, neck, and back, and are very frequent in warm climates, where the plague is most prevalent. In our climate, they are not often fatal, especially if the size and situation of the tumor are favorable.

It is in vain to attempt to disperse the tumor; emollient poultices and fomentations must be used in the beginning. Rye or flax-seed meal, mixed with the strong tea of the white poppy-heads, or lettuce leaves, makes the most suitable poultice. In this affection, the strength must be supported with camphor, ether, opium, quinine, fresh air, and a nutritious diet. The bowels must be moved with mild cathartics, and everything done to tranquillize the system. A tea-spoonful of Hoffman's anodyne liquor, and a table-spoonful of valerian tea, may be given, every two hours.

A crucial incision should be made into the tumor, to assist the escape of the dead core, and every means used to destroy the acrimony of the discharge.

CARDIAC ORIFICE.—The upper orifice of the stomach, where the meat-pipe terminates. The lower opening of the stomach is called the pylorus.

CARDIALGIA—Heart-burn.—It is a painful, though not very dangerous, affection of the stomach, denoted by a burning sensation, pain, sour eructations, a discharge of a ropy, watery fluid, upward, and sometimes faintness, inclination to vomit, and a heavy load at the pit of the stomach. See *Heart-burn*.

CARDITIS—Inflammation of the Heart.—See *Inflammation of the Heart*.

CARIES—Ulceration of the Bones.—This disease is known by a deep-seated pain, which is felt to proceed from the bone. There will be a tenderness to the touch; a swelling of the bone, or the periosteum, a transparent membrane which covers it; a loose and flabby feel to the flesh, and a dark or purple color of the skin. When the bone is laid bare, it appears like any other ulcerated part. The dead part of the bone will often separate from the portion which is alive, and make its way to the surface through the flesh and skin. Dr. Good mentions a case, where the tibia or shin-bone of each leg mortified, and came out in pieces, through its whole extent, and its place was supplied by a callous, which, in process of time, became as hard as a bone. The treatment of this disease consists in laying open the bone, and in keeping up a free passage, by means of lint plugs, covered with salve, for the exit of the dead parts, and in counteracting the inflammation by antiphlogistics. Poultices made of the liquor of the wild indigo root are probably the best applications which can be made to a caries of the bone. The pyroligneous acid and the creosote have sometimes been employed to stimulate the dying parts. The general strength should be carefully supported in these cases by a nourishing aliment, and, sometimes, by the use of wine, quinine, and of other

tonics and stimulants. The powdered charcoal is sometimes sprinkled upon the diseased bone to correct the fetor, and prevent the extension of the disease. The chlorides of lime and of soda have the property, in a peculiar degree, of removing the offensive smell arising from diseased and dead parts, and may assist in arresting the progress of this disease. The disease is caused by wounds, blows, and a bad condition of the body.

CARMINATIVE.—A medicine which allays pain and expels wind from the stomach and bowels. The essences of peppermint, cinnamon, tansy, tincture of camphor, spirits of red lavender, ether, ginger, red pepper, mustard, gin, cardamom, caraway, and anise seeds, are the most common and efficacious carminatives.

CASCARILLA.—This bark is taken from a tree, growing in the Bahama Islands, which grows to the height of about twenty feet. It comes to us in curled pieces, rolled up into short quills, about an inch in length. It is a pure bitter and tonic; less liable to produce disturbance of the stomach and bowels than the Peruvian bark. The cascarilla, in powder, in a dose of from ten to thirty grains, administered every four, or six hours, has been found extremely serviceable in chronic diseases of the stomach and bowels, typhus fever, and many other diseases of weakness. Its virtues are extracted partially by hot water, and entirely by new rum. The cascarilla has less astringency than most other bitters.

CASEINE.—The chief constituent of milk.—It is identical in composition with fibrine and albumen, the chief constituents of blood. It is found in plants, such as peas, beans, and lentils. Vegetable and animal caseine are ascertained to be the same in all their properties. Caseine is not coagulated by heat, and is much more soluble than either fibrine or albumen. It contains a much larger proportion of the earth of bones than blood, and in a more soluble form. It is the chief principle of nourishment of all young animals who live on milk. Animal caseine contains, by analysis, fifty-four parts in a hundred of carbon, seven of hydrogen, fifteen of nitrogen, and twenty-two of oxygen and sulphur. The vegetable caseine contains the same elements. Fibrine and albumen contain almost exactly the same proportions of carbon, hydrogen, nitrogen, oxygen, and sulphur. Gelatine, a fourth constituent of animal matter, contains nearly the same chemical elements, and in the same proportions. The vegetable fibrine, albumen, caseine, and gelatine, taken into the stomach, in our food, probably go, without any essential change, into the formation of the fibrine, albumen, caseine, and gelatine of the body.

CASTOR-OIL.—*Oleum Ricini.*—This oil is comparatively a modern discovery. It is not prescribed in the old authors upon medicine. It is pressed from the seeds of the *palma christa*, a plant which grows in the West Indies and southern states. The plant or tree grows to the height of fifteen or twenty feet. The seeds are of the size of small beans. They have brittle shells, which contain white kernels of a sweet, oily, nauseous taste. The skin has a

burning taste, and one or two of the seeds swallowed whole operate as a purgative and emetic.

The kernels yield a fourth part of their weight in oil. One method of obtaining the oil is, to shell the seeds and boil them in water, and as the oil rises, to skim it off. The other method is to put the kernels into bags, and these bags into a press, and apply a screw or weight in the same manner as is used to obtain the linseed oil. The oil obtained in this way is called the cold expressed oil, and is thought to keep much better than that which is obtained by the agency of heat. The cold expressed oil is white and clear; castor-oil obtained by boiling the beans is of a reddish color.

The castor-oil is a safe, mild, thorough, sure purgative. Its taste is somewhat nauseous, but it excites a motion of the bowels the nearest to the natural, peristaltic motion, of any purgative which has ever been discovered. It often insinuates itself through the obstructed portions of the bowels better than more powerful purgatives.

The proper dose for a grown person is one ounce, or two table-spoonfuls. The dose for an infant, a small tea-spoonful.

In the disorders of the bowels, such as dysentery, diarrhœa, and cholera morbus, the castor-oil is a charming remedy. In the bowel complaints of children, mixed with a few drops of laudanum, it has produced more cures, in our hands, than all other remedies put together. It appears to soothe the inflamed surface of the intestines, while it inspires a motion. In some instances, the castor-oil cannot be so well retained upon the stomach as other purgatives; in such cases, the medicine should not be urged. To swallow it easily, it should be slightly warmed by mixing it with a spoonful of warm water or milk. The thinner it is made, the easier it can be swallowed. A tea-spoonful of molasses, or a spoonful of orange-juice, are as good as anything to take after it. Two or three drops of the essence of peppermint will sometimes make it set better upon the stomach, and take the nauseous taste from the mouth.

In cases of rupture, where the bowels protrude through the walls of the belly, the castor-oil is a very safe medicine to take. It disentangles the involved portions without the danger of forcing a passage, as, where the obstruction is complete, it readily returns by the stomach.

The castor-oil is never employed in any other way than as a purgative, although its virtues may be applicable to other purposes. A tea-spoonful of castor-oil, mixed with a tea-spoonful of the syrup of squills, is one of the best medicines which we have ever used in the coughs, colds, and sore throats of children.

CATAPLASM—A Poultice. — White bread, rye meal, and flaxseed meal, make the best poultices for inflammation. These substances are often mixed with watery solutions of sugar of lead, white vitriol, and alum, to make them more cooling and discutient. In painful ulcers, such as cancers, a drachm of the hemlock leaves

boiled in a quart of water, until it is reduced to a pint, and mixed with flax-seed meal, makes an excellent poultice for easing pain and destroying acrimony.

CATARACT.—This is a disease of the crystalline lens of the eye, or of its capsule. The lens, or its capsule, changes from a transparent to a perfectly white or gray color; and, in some rare instances, to a black color. The opacity begins by degrees, in small white spots, and gradually involves the whole lens or capsule. There is little or no pain, and seldom any derangement of the health. The lens sometimes becomes dissolved, or converted into a milky fluid. The blindness increases in proportion to the opacity.

This affection, where the optic nerve remains sound, is often cured by extracting, depressing, or breaking up the lens.

CATARRH.—Catarrh is sometimes a chronic disease, attended with a dropping or trickling of an acrid, watery matter, from the posterior nares into the throat. This is the affection which most commonly goes under the name of catarrh. It is attended with a continued hawking and raising, and in many people exists the whole year round, but is particularly aggravated in the fall and beginning of winter. There is more or less of a cough, which is generally troublesome in the fore part of the night. In some cases it will throw the person into a fever, and put on the semblance of consumption, but is not apt to end fatally, unless the person is advanced in life.

A person affected with chronic catarrh must be warmly clothed, avoid all exposures to sudden and intense cold, dampness, and wet feet. When the affection becomes aggravated, he should take an emetic of ipecac., follow an abstemious course of living, and confine himself to a warm room. In ordinary cases, a pill of opium and ipecac., one grain of each, taken at night, for a week or fortnight, ensures relief. The fine powder of bayberry root, taken as a snuff, has helped many people. Smoking tobacco is a relief to some. The removal to a warm climate is a pretty certain cure of the disease. It is the consequence of the epidemic influenza and repeated colds. In some cases, it is a family complaint. Dry feet, warm clothing, moderation in eating and drinking, and a particular caution in getting over-heated, and then going out into the cold air, will do much to ward off the complaint. On looking into the throat, in this complaint, there is redness and a thickening of the lining membrane, with the secretion of a pus-like matter. A gargle of white vitriol, dissolved in water, is well adapted to this state of the throat. See *Influenza*.

CATECHU.—This substance is an extract obtained from the inner wood of a tree which grows in Japan. It is one of the most powerful astringents which the vegetable kingdom affords. The color of it is a dark-brown; it is brittle, hard, and reducible to a fine powder. There are two kinds of catechu; the one is of a light yellowish-brown color, and the other a dark-brown color. It appears to be a resinous substance, although obtained by decoction.

The catechu is almost entirely soluble in hot water, and in alcohol. It is given to stop hemorrhages or bleedings from the bowels, bladder, stomach, and womb; to check diarrhœas, and to strengthen the tone of the diseased organs. In the canker, it is used as a gargle, and drank in the form of tea. It is commonly taken in powder, in a dose of from fifteen to thirty grains. To a child two years old three grains may be given.

In the monthly sickness of females, where the menstrual secretion is profuse, fifteen grains of the powder, taken three times a day, dissolved in hot water, is an efficacious remedy. In all cases of a relaxation or weakened state of the flesh and vascular system, the catechu may be taken with advantage.

CATHARTIC.—Any medicine which increases the motion of the bowels and the number of alvine discharges, such as castor-oil, salts, aloes, rhubarb, magnesia, jalap, butternut, and sulphur.

CAUSTIC.—A caustic is a substance which eats, or corrodes, the flesh and solid parts of the body. The ancients used a hot iron, but the moderns employ corrosive substances.

The most powerful caustics are crude potash, nitrate of silver, aquafortis, oil of vitriol, and the marine acid. The mild caustics are red precipitate, alum, calomel, and blue vitriol. See *Lunar Caustic*.

CELLANDINE, THE GREATER—*Chelidonium Major*.—This plant grows in meadows and low, wet places. It is known, in some places, by the name of tetterwort. It rises two or three feet in height; has a multitude of tender, round, green, watery stalks, with large joints; the leaves are large, with edges like the teeth of a saw, and very tender; the flowers are yellow, succeeded by long pods, which are very brittle. The leaves and the roots are used for medicine. They have a faint, unpleasant smell, and a bitter, acrid, durable taste, which is stronger in the roots than in the leaves. They are opening and diuretic, and useful in the jaundice, when unaccompanied with inflammation. Of the dried root, from half a drachm to a drachm is a dose. The root or leaves, green, steeped in water, may be taken in the dose of half an ounce of the tea, or a table-spoonful. Diluted with milk, the fresh juice is used to destroy films in the eyes. The clear juice is said to kill warts. A tea made of the fresh root is often used in the cure of dropsy, and affections of the skin, such as tetter and other running sores.

CELLULAR MEMBRANE.—This membrane is a thin, transparent plate or sheet of fibrous matter, which is involved in every part of the body. The cells or little bags in this membrane contain the fat or adipose substance. It is this membrane that butchers blow up to improve the looks of their veal. It is a tissue of cells, variously connected together. It makes a bed for the muscles and bones, encloses them all, and unites them one to the other. In chronic diseases, where emaciation takes place, the

cells of this membrane are emptied of their fat, as the cells in a honeycomb are emptied by bees in winter.

CENTAURY, AMERICAN.—The flowering heads are the part of this plant which is used in medicine. The common American centaury has a bitter taste and an aromatic smell. It is a tonic of no inferior qualities. It is often given in remittent and intermittent fevers, instead of quinine or the Peruvian bark. The red centaury is said to be a powerful medicine in promoting the menstrual discharge of females. It is used in the form of a tea, taken in copious draughts, several times a day.

CHALK.—This substance is composed of lime and carbonic acid gas,—choke damp. By the action of heat, the gas is driven off and the lime remains. Marble and chalk are the same substance, though they differ very much in hardness and outward appearance. The white chalk is the kind employed in medicine. In its native state, it is mixed with sand and clay, from which it is freed by grinding in a mortar, and washing. It is then called prepared chalk. It is employed to neutralize acids or sourness in the stomach. As an absorbent in looseness of the bowels, it is deemed an excellent medicine. For this purpose, it should be taken in powder in the dose of a drachm. A child two years old may take eight grains. Mixed with water, sweetened with loaf sugar, and seasoned with a few drops of the essence of cinnamon, it makes a palatable medicine to correct the sourness in the bowel complaints of children.

CHALYBEATE.—This name is applied to all those medicines of which iron composes a part. The chief preparations of iron to which it refers are the rust of iron, the muriate of iron, copperas or sulphate of iron, and the mineral waters which contain iron in solution, such as the Ballston and Saratoga water. Any mineral water which abounds with iron is called a chalybeate.

CHAMOMILE FLOWERS.—The chamomile is a perennial plant, indigenous to the south of England, but cultivated in gardens for the purposes of medicine. It is a mild bitter, suitable for children, and weak stomachs in general. A strong tea made of the chamomile will excite vomiting, and is often used to assist the effect of other emetics. In the chronic stages of diarrhœa, dysentery, and other complaints of the bowels, the chamomile tea is a useful tonic. It is much used in nervous diseases and the complaints of women. The flowers may either be chewed or made into a tea. Half a tumbler of the tea should be drank three or four times a day, where it is used to promote the appetite and the strength.

CHANCRE—Syphilitic Ulcer—Venereal Ulcer.—A chancre is a small sore produced upon the surface of the body, generally upon the genital organs, by the venereal infection, received by a promiscuous intercourse between the sexes. It first appears in the form of a small red pimple, which afterwards ulcerates and spreads into an open sore. After the pimple breaks and becomes

a sore, there is commonly a hard rim formed around it, as if to prevent its spreading any further. A chancre often resembles a pustule of the small pox or the cow pox; it will be as circular, and the edges of it as hard, and rise up above the surrounding surface like a vaccine pock. Commonly, several of these venereal pocks will make their appearance at once upon the parts which have received the infection. The organs of generation, in both sexes, are the principal seat of chancres, as it is there that the infectious matter is applied. Chancres will sometimes be irregular, ragged sores; and, in this form, appear to spread with greater rapidity. The contaminated part will often swell, become red and extremely sore. The surface of the pock, or ulcer, will, in the first instance, be covered with a white coat, or little white blister, but afterwards discharges a yellowish matter.

Chancres commonly appear about five or six days after the infection, but sometimes not until the lapse of two or three weeks. Some have supposed the infectious matter which produces chancres to be different from that which produces the clap, but many of the medical profession regard it as identically the same.

The first application which should be made to a chancre, or a venereal ulcer, upon the genitals, is a wash of white vitriol, twenty grains to half a pint of water. A rag, wet with this liquor, should be kept on constantly, for the first twenty-four hours; after which, the pimples or ulcers should be covered with the red precipitate, or calomel, and washed off, once a day, with the liquor of sugar of lead. This course should be pursued until the ulcers are completely healed. A solution of the corrosive sublimate, in alcohol or new rum, applied as a wash, will often heal the ulcers. Eight grains of the corrosive sublimate to eight ounces of alcohol will make a wash as strong as it should be used.

Where the foreskin cannot be drawn back from the glands, on account of the swelling and inflammation, it will be necessary to use soft warm water and poultices. In some obstinate cases, an incision must be made in the prepuce, which will allow it to retract, so that the ulcers on the glands can be washed and dressed with the precipitate or calomel.

At the same time that the chancres are dressed with mercurial preparations, it will be necessary to take mercury internally. Two grains of calomel, in a powder or pill, should be taken every day, for a week, when it will be advisable to stop three or four days, and begin again, and so continue it, until the ulcers are healed. What is called the blue pill may be used in the same dose as the calomel, if this form of mercury should be preferred. In some cases, a solution of the corrosive sublimate, in spirits, is taken internally. Not more, however, than an eighth of a grain of the sublimate should ever be taken at a time. Four grains of the corrosive sublimate may be dissolved in four ounces of spirits, and of this a tea-spoonful may be taken twice a day. But, in whatever form the mercury is used, it should never be continued

long enough to salivate. The effect is entirely unnecessary; on the first perception of a coppery taste in the mouth, the mercury should be suspended until this taste is entirely gone.

CHEST—Thorax.—The chest is divided from the belly or abdomen by the midriff. This cavity contains the lights or lungs, heart, thymus gland, meat-pipe, thoracic duct, part of the aorta, eighth pair of nerves, and a part of several large veins. It is divided into two parts by a membranous partition, called the mediastinum. In breathing, this cavity expands and contracts.

CHICKEN POX—Variocella.—The eruption of the chicken pox resembles that of the small pox, and is sometimes mistaken for it. But the pustules of the chicken pox never contain matter, like those of the small pox; when punctured, they emit nothing but a watery fluid. The chicken pox is contagious, like the small pox, and, like that disease, is never experienced but once in a person's life. This distemper begins with a slight illness, seldom amounting to a severe fever, and ends in five or six days. There is some sense of chilliness; a slight increase of heat, thirst, headache, and pain in the back; a quick pulse, and some degree of restlessness. On the second or third day of the illness the pustules will be filled with a watery fluid, and, by the fifth, begin to dry away. The pustules are commonly smaller than those of the small pox, more pointed, and fewer in number. Although, when we have nothing but the pustules to determine by, we may mistake a case of chicken pox for one of the small pox, yet, if we have noticed the early appearance of the pustules in the chicken pox, the slightness or total absence of fever, the watery contents of the pustules, and their drying away by the fifth day, we need not to be at a loss to decide upon the nature of the disease. Medicines, in this distemper, are, in general, quite unnecessary. The most that will be required will be a dose or two of the Rochelle powders, a little ipecac. in grain doses, or a solution of nitre to abate the fever. The drink should be cold, and the diet light. There is another distemper, which somewhat resembles this, called the swine pox, but which seldom requires the aid of medicine. The swine pox is not so common as the chicken pox, and the pustules are more irregular.

CHILDBED FEVER—Puerperal Fever.—It is needless to say that this fever is peculiar to women. Generally, though not universally, it attacks women after the birth of a child. It is commonly an inflammatory fever, though sometimes it is a malignant or typhus fever. Its course is generally short, and the commotion of the system, during its continuance, great.

The time of its appearance after delivery corresponds, in general, very nearly with the appearance of the milk; and some have considered it a consequence of the commencement of that secretion. About the third or fourth day after child-birth is the usual time of its development. From all the evidence derived from observation, and dissections after death, the fever arises from an inflammation of the womb and the neighboring organs and parts,

the bowels, the peritoneum, liver, omentum, bladder, and kidneys, but especially, and primarily, the uterus or womb.

The common forerunner or harbinger of this disease is a shivering fit, the degree and duration of which show the danger of the coming fever. This is succeeded by a hot, dry skin, thirst, restlessness, a quick, hard, and small pulse, disturbance of the stomach and bowels, and finally by a profuse sweat, which is sometimes critical, or carries off the fever. In some cases, the patient never recovers from the cold fit, but remains sunken, oppressed in body and mind, and dies within twenty-four hours of the attack. In other cases, the puerperal fever commences without a shivering fit.

In addition to a hard, quick pulse, there is a tenderness, soreness, and often pain, in the region of the womb; the belly is swelled; the show or lochia is generally stopped or much diminished; there is sickness of the stomach, and a vomiting of a green or yellow fluid; the milk dries away; the patient cannot move without pain in the abdomen; the tongue becomes furred; the bowels are affected with a constant instinct to go to stool, without a discharge; and the patient entertains the strongest apprehensions of her own danger.

The pain and tenderness in the abdomen, the suppression of the secretions, the cold fit, and the subsequent heat and sweating, are the chief signs of the disease.

The signs of inflammation in the abdomen and the fever continue for a few days, and are succeeded by indications of putridity. A black, gummy coat covers the inside of the lips; purple spots appear upon the cheeks and skin; the stomach refuses every species of nourishment, and a twitching of the muscles, and hiccoughs, forbode a speedy termination of the disease in death. The favorable signs are, a return of the lochia; a warm, moist sweat; a reduction of the swelling of the belly by the discharges from the bowels; the return of sleep; and a subsidence of the general commotion of the system.

An early delirium is always a bad sign. If an erysipelatous tumor, of a dusky red color, about the size of a ninepence, appears upon the knuckles, wrists, elbows, knees, or ankles, it is almost always a mortal sign.

In many cases, a foundation for the puerperal fever appears to be laid before child-birth, or during labor. The later its attack after child-birth, the more hope there is of a favorable termination.

Domestic Remedies.—The first object is to determine whether the fever is of the typhoid, malignant kind, or the inflammatory kind, of puerperal fever. In the typhoid kind, the pulse is quick, but weak and small. In the inflammatory kind, it is quick, full, hard, and strong; the heat is greater, the pain in the belly more acute, and the prostration of the powers of the body and mind much less, than in the typhoid puerperal fever.

Almost the only things which can be done in this disease, without the aid of a physician, are, to administer an injection of warm molasses and water; to foment the bowels with warm water or

brandy ; to give warm aromatic and carminative drinks, such as peppermint and tansy tea, balm and pennyroyal, during the cold fit ; together with a dose of castor-oil, or a Rochelle powder, and to make warm applications to the feet and legs.

Professional Remedies. — In the inflammatory puerperal fever, blood-letting is the main remedy. In the typhoid puerperal fever, wine whey, quinine, cordials, gentle doses of castor-oil, magnesia, or salts ; brandy, applied to the belly ; camphor, Hoffman's anodyne liquor, acetate of ammonia, the hot drops, or tincture of red pepper, and chicken broth, or barley gruel, are the proper means to be used.

The cold fit should be shortened, by applying warmth to the surface of the body, and the administration of warm drink. If the pulse is forcible, the heat above the natural standard, and the pain in the abdomen constant and severe, the patient should be bled from the arm immediately on the accession of the fever ; care being taken to distinguish it from the milk fever, and an inflammation of the breasts, which sometimes produce considerable disturbance in the system. If the first bleeding does not subdue the disease, a second, and a third, may be necessary. There is no disease where this remedy is more indispensable ; but it must always be employed in the earliest stage of the disease ; if postponed until the disease has reached its height, it will only do mischief. The quantity of blood drawn must be graduated by the strength of the disease and the violence of the symptoms. The tartrate of antimony in solution, in the dose of a quarter of a grain, once an hour, should be given until a moisture is produced upon the skin, and the bowels loosened. If there is nausea and vomiting, an emetic of ipecac. will be proper, in any stage of the disease before the powers of life are entirely prostrated. The bowels should be drained by a dose of castor-oil, salts, magnesia, or some other active purgative. At night, if the pain and restlessness prevent sleep, an opiate should be given. Morphine, or the Dover's powder, are, in general, more suitable than laudanum or opium.

In mild cases, the use of leeches will be preferable to letting blood from the arm ; and, even in severe cases, leeches may be employed to reduce the inflammation.

After the vehemence of the fever has abated, a large blister to the abdomen should be applied. To assist and continue the secretions by the skin and kidneys, the sal nitre, in six grain doses, should be given, every three hours ; or, in its place, a tea-spoonful of the sweet spirits of nitre. Warm injections of molasses and water, or a solution of the gum arabic, will assist in assuaging the inflammation of the abdominal viscera.

The acetate of ammonia, in a state of effervescence, is a charming remedy, whether it is made of the lemon-juice and the salts of hartshorn, or of the distilled vinegar and that salt.

Where there is not a looseness in the bowels, they should be daily drained by some purgative.

The stomach should be kept pretty well replenished with barley gruel, milk and water, bread-water, or arrow-root gruel.

The abdomen should be well fomented or steamed with heated water or alcohol. A flannel covered with the volatile liniment is sometimes found serviceable.

The typhoid puerperal fever, like the typhoid pneumonia, demands a mild, stimulating treatment. The bowels must be moved by gentle doses of physic, or injections; the secretions of the skin and kidneys assisted by the use of the acetate of ammonia; and the vital powers supported with wine whey, quinine, colombo, wine and cordials. Blood-letting is improper, and all reduction of the system dangerous.

This fever, in some seasons, is either epidemic or contagious. It has once appeared in this city, to an alarming extent, among lying-in women, within the last seven years. Dr. Francis, of New York, relates an instance of its prevalence in the State of New Jersey, when it was supposed that it was carried from one woman to another by the accoucheurs themselves.

In conclusion, we must add, that in this formidable disease very much depends upon good nursing and a comfortable situation. A prompt, careful, sensible nurse, is almost the *sine qua non* of a cure.

CHILD-BIRTH. — For the management necessary in the birth of a child, see *Midwifery*.

CHILBLAIN — Fernio. — The chilblains are inflammations of the fingers, toes, and heels, in consequence of being frost-bitten, or exposed to a great degree of cold. Snow-water produces them. The skin will be red, thickened, and painful. An incessant itching is, however, the most troublesome symptom. Where the degree of cold has been great, and the exposure to it long continued, the parts will mortify and slough off.

The parts that have once been frost-bitten, or injured by cold, should afterwards be kept warm and dry. Treading or standing in snow-water renews the inflammation and increases the itching.

The parts should be washed in laudanum, to allay the itching, and afterwards covered with plasters of diachylon. If the inflammation is deep, poultices should be employed. In common cases, lead-water, and the solution of white vitriol, will be found of the most service. New rum will sometimes prove a good discutient. Alum-water, well applied, will cure them. The calamine ointment is also an excellent dressing. But the main point is to avoid the cold and the snow-water, which produce them. If ulcerations are formed, they must be poulticed with rye meal, mixed with the liquor of the wild indigo root, boiled. The powder of calomel, where there is a slowness in healing, may be strewed on the ulcers.

CHLORIDE OF LIME. — The bleaching gas or acid, called chlorine, combined with lime, forms the chloride of lime. Dissolved in water, it is one of the best correctors of putrefaction and contagion. A little of the solution is poured into saucers, set in different parts of the room, in cases of the small pox, Asiatic chol-

era, typhus fevers and other contagious disorders, and allowed to evaporate. It will destroy the smell of putrid sores, and of dead bodies. Eight or ten drops of the solution, in a wine-glass of water, makes a useful gargle in the putrid sore throat. The same dose, swallowed, will correct a fetid breath.

CHLORIDE OF SODA.—This substance is composed of chlorine and the alkali called soda. It is soluble in water, and principally used to correct contagions and to destroy the smell in putrid diseases. It is sold in bottles. A few spoonfuls of it poured into saucers and left to evaporate in a sick room, very soon destroy all the bad smells. Its properties are very much like those of chloride of lime, and may be used in its place. It corrects the fetor of the breath, in a dose of eight or ten drops, in a little water, and makes a good wash to destroy the smell of the perspiration. It is used as a gargle in the sore throat.

CHOLEIC ACID.—One of the constituents of bile. This acid, in combination with soda, forms the principal part of bile; the combination is called choleate of soda.

CHOLERA, ASIATIC.—This appalling disease originated in Hindostan, and travelled progressively northward until it reached the north of Russia; then it took a course southward and westward, travelled through Poland, Prussia, Austria, the north of Germany, and took up its abode for a while in Great Britain. It finally travelled across the Atlantic ocean, touched Canada severely and New England lightly, and visited in turn all our large cities in the Middle, Southern, and Western States. In travelling from Hindostan to the United States it took a period of fifteen years. In travelling from Russia to this country it took a period of three years. It never went further south on this continent than the Havana in Cuba, and Campeachy on the Spanish Main. It visited all the cities of Asia before it turned its course north. It commenced in 1817, in the Delta of the Ganges, a hundred miles north of Calcutta.

The Asiatic cholera commenced much in the same way as the cholera morbus, — with vomiting and purging, though, in general, with more prostration of the strength. The disease seemed to differ from the cholera morbus in the same way that the typhoid pneumonia differs from the common pneumonic inflammation, — in a malignant condition of the whole system. After a few hours' sickness, the eyes sunk into the head, the body became cold, the pulse quick, but scarcely perceptible to the feel, violent cramps seized the muscles, especially of the legs and abdomen, the skin became purple and shrunk, and the evacuations from the stomach and bowels, instead of being of a bilious color, resembled rice-water, or the chyle itself. There was not always vomiting; in some instances a diarrhœa constituted the only disturbance of the alimentary canal.

On dissection, no very high degree of inflammation was ever found; the blood-vessels were found engorged, and the mucous membrane of the intestines red. The same kind of rice-water sub-

stance discharged before death was present in the small intestines after death.

No mode of treatment was ever found very successful, and it still remains in doubt whether the disease was only an epidemic, or propagated by contagion.

On the first appearance of the griping pains, however, the patient should take a moderate dose of some kind of physic; and, perhaps, the best would be rhubarb, or rhubarb and senna, steeped with anise or some other kind of aromatic seeds, sweetened with loaf sugar, and a small quantity of brandy or some kind of essence added. This should be repeated every four hours until it produce a decided operation on the bowels, which can be known by the change in the evacuations. They will contain more fecal matter, and be more highly tinged with bile. After the physic has had its effect, that is, produced from two to four evacuations, should the disturbance continue, a full dose of laudanum should be immediately given, and a smaller dose repeated every four hours until the bowels be quieted. If they are very much relaxed, the laudanum may be given in a little good port wine or brandy; but in an ordinary case this would be unnecessary, and, should fever attend, improper.

The diet should consist of flour, rice, or arrow-root gruel, crackers, and stale white bread. A little good port wine may be taken, if no fever exist, two or three times a day, with loaf sugar and water. A tea made of common blackberry vine roots, pennyroyal, or catmint, may be used as a constant drink. The feet should be kept warm and dry. The bowels should be rubbed with warm brandy, spirits of turpentine, or some other powerful stimulant, and be kept well covered with flannel. All kinds of fruit and green vegetables should be avoided, as they would certainly aggravate the complaint.

CHOLERA INFANTUM.—This disorder is denoted by a severe vomiting and purging. It is commonly a very short disease, terminating either in health or dissolution in a few days, and often in a few hours. In the months of July and August, we have seen children sicken and die of this malady in five or six hours from the commencement of the vomiting. It differs in nothing from the cholera morbus, but in the age of those it attacks, and in the inability of children to support pain, sickness, and evacuations, for any length of time, without sinking.

An accumulation of heat about the bowels and stomach, and in the hands and feet, is the most common forerunner of the disease. Soon succeed vomiting or purging, or both together, pain in the pit of the stomach, griping of the bowels, shortness of breathing, a sudden loss of heat, great prostration of the strength, a quick, small, feeble pulse, thirst, followed by a cold perspiration. In fatal cases, the natural heat never returns, but the patient becomes weaker and colder by every discharge, until dissolution takes place.

The discharges from the stomach and bowels consist of bile and the other juices from the digestive organs; and are either of a yellow or green color. The constant retching, and the deep pain at the pit

of the stomach, are the most remarkable symptoms, and require our principal attention.

Remedies.—Strong poppy tea should be given the child every ten or fifteen minutes; and if this does not allay the vomiting, a dose of laudanum or paregoric should follow very soon. The dose of laudanum for a child one month old may be one drop; for a child three months old, three drops; for one of six months old, four drops; for one a year old, five drops; and for one two or three years old, from eight to ten drops. This dose may be repeated every two hours until the stomach and bowels are tranquillized. Twice the quantity of laudanum named for each dose may be given by way of injection, if the stomach refuses it. The vehicle should consist of a table-spoonful of flax-seed tea, or some other mucilage; a greater quantity will not be apt to stay. If the discharges are principally downward, it will be best to give the opiate by the mouth; but if they are chiefly upward, it will be advisable to give it by injection.

Warm flannels should be applied to the surface of the body, and a warm tea of poppy-heads to the pit of the stomach. If these cannot be had, ten or fifteen drops of laudanum or morphine may be applied. As soon as the stomach is quieted, a dose of calcined magnesia, or, which is more likely to stay on the stomach, calomel, should be given. The dose of calomel is from half a grain to five grains, for children between one month and three years old. In mild cases of the disease, a dose of castor-oil should be given. A mustard poultice, or hot brandy, may be applied to the stomach. A few tea-spoonfuls of peppermint, cinnamon, ginger, or tansy tea will often assist in settling the stomach. If these remedies fail, an emetic of ipecac. should be given, unless the vital powers are too low. The chalk julep should be tried. If the disease continues for some time, a blister may be drawn upon the stomach. If there is great coldness of the surface and loss of strength, wine, brandy, or gin should be given to restore the strength. As relapses of the cholera infantum often occur, it is safe to keep up the effect of the opiate for two or three days. If an emetic can be given in the hot stage before the vomiting commences, it may prevent the disease.

If the disease settles into a chronic bowel complaint, the remedies proper to be used will be found under the head of *Bowel Complaint of Children*.

CHOLERA MORBUS—Vomiting and Purgings.—Like the cholera infantum described in the preceding article, the cholera morbus begins with pain at the pit of the stomach, vomiting and purging, shortness of breathing, thirst, sudden loss of heat, great prostration of the strength, a small, quick, feeble pulse, followed by a cold sweat. It is principally a disease of the hot months, and is probably owing to the effect of heat upon the system, favored by some peculiar change in the temperature or constitution of the atmosphere. The incidental causes are the use of indigestible food, and of green fruit and vegetables.

Domestic Remedies.—In the very commencement of the vomit-

ing and purging, it is best to give several draughts of warm water, barley gruel, flax-seed tea, or rice-water, that all the solid contents of the stomach and bowels may be removed. Flannels soaked in a hot tea of poppy-heads should be placed upon the stomach, and renewed as often as they grow cool. A steam raised in this way assists greatly in allaying the pain of the stomach and the griping of the bowels.

A grain and a half of opium in pill, or forty drops of laudanum, should be given as soon as the stomach appears to be unloaded, and repeated every two hours, if necessary. But where the vomiting and purging evidently arise from substances taken into the stomach, a tea-spoonful of the powdered ipecac., or some other emetic, must be given first, to remove the cause of the irritation.

If opium cannot be retained by the stomach, a tea-spoonful of laudanum may be given by injection in a wine-glassful of flax-seed tea, or some other mucilage, and repeated every two hours until the disease abates. The surface of the body must be kept warm by the application of dry heat.

The soda and Rochelle powders, and the acetate of ammonia, often have the happiest effect in quieting the stomach. Lemonade, or the sour drops, will sometimes allay the commotion of the stomach and bowels. In some cases, a tea made of the camomile flowers, cascarilla bark, or colombo, rendered sour by a few drops of nitric acid, will succeed where other means fail. The patient must be kept very still, as all motion increases the vomiting and purging.

Professional Remedies.—Where the disease continues some days, and the heat of the body is not much diminished, a dozen leeches should be applied to the pit of the stomach. Five grains of calomel should be given, three times a day, until it operates upon the bowels, followed by a dose of senna and manna, or castor-oil.

It will always be advisable to give an emetic where the other means fail, and, perhaps, to repeat it. We have known this remedy to have succeeded after almost everything else had been administered.

A large blister upon the chest assists greatly in removing the irritation of the main passage.

Camphor, musk, ether, red lavender, tincture of red pepper, peppermint, and other stimulants, must be used in case of great coldness of the extremities, loss of strength, and a passive sweat. The chalk julep is no mean remedy in the cholera morbus. A plaster of the anodyne balsam upon the stomach will assist in allaying the sickness.

In some cases, two or three grains of opium at a time, in pill, will be required to allay the gastric irritation.

But, in spite of all remedies and the utmost skill, the disease will sometimes be so rapid in its progress and malignant in its character, that death cannot be averted. The retching and vomiting continue; the heat of the body departs; the pulse sinks; the surface

becomes purple; hiccough ensues, and life goes out like the snuff of a candle.

In hot weather live temperately, and avoid the use of all crude and indigestible substances for food.

CHOLESTERINE. — One of the chemical principles of bile. It is insoluble in water, and incapable of mixture with the alkalies.

CHONDRINE. — The substance of which the cartilages of the ribs are composed.

CHORDEE. — A peculiar symptom in the gonorrhœa of men, arising from spasmodic contraction. The part should be kept wet with laudanum, and a dose of forty or sixty drops taken every night, internally, in two table-spoonfuls of the camphor mixture.

CHOREA — St. Vitus' Dance. — Convulsive motions of the limbs, as if the person were dancing. See *St. Vitus' Dance*.

CHRONIC. — Diseases without much fever, and of long continuance, are called chronic. Diseases, in their commencement, are called acute.

CHYLE. — Chyle is the animal liquid into which the food is converted by the process of digestion. In the lacteal vessels which secrete it from the dissolved aliment in the bowels, it has the appearance of milk, and though very unlike that fluid in its nature, it is separable into three distinct substances, — fibrine and a little coloring matter, a fatty portion which rises to the surface like cream, and a watery liquid like whey. Chyle appears to be to the human body what sap is to the tree or plant. It is taken up or secreted by thousands of little vessels which float in the liquid aliment, conveyed into the thoracic duct, and by that into the blood-vessels. It is the aliment, animalized. See *Digestion*.

CHYME. — The substance into which the food is converted by the saliva and gastric juice. It is of the consistence of thick porridge. The food is chewed and mixed with the saliva, swallowed into the stomach, and there dissolved by the gastric juice. The chyme is a grayish, pultaceous mass, of a sweetish taste, which may often be seen vomited up, a few hours after food has been taken.

CIRCULATION. — The circulation of the blood is one of the most interesting subjects in the science of medicine. The motion of the heart, the beating of the pulse, the constant stream of gory fluid sent rapidly over the whole system, the change of the blood from a purple to a red color in the lights, and its endowment with vitality, are all calculated to awaken curiosity and to excite admiration. The vessels which contain and circulate the blood are of two kinds, the arteries and the veins. The arteries are hard, stiff, and elastic tubes, and the veins are soft and limber, and when empty, collapse. When an artery is opened, the blood flows from the orifice in jerks. When a vein is opened, the blood flows in a steady stream. The reason of this is, that the arterial blood is moved by the motion of the heart, and the venous blood by the

force of the action of the venous capillaries, or by the secretory power of the veins, which is constant and steady.

The small veins of the body all unite into two large veins, called the *venæ cavæ*. One of these large veins receives the blood from the head and the upper part of the body, and the other, from the lower part of the body. They both empty the venous blood into the right auricle of the heart. The auricle contracts and sends the blood into the right ventricle. The blood is prevented from returning back into the auricle by valves situated between the auricle and ventricle. The ventricle contracts and sends the blood into the pulmonary artery,—the vessel which carries the blood into the lights or lungs. In the lights, by the process of breathing, the venous blood is changed into arterial or vital blood, and receives a bright red color. Four arteries, peculiar to the lights, return the blood to the heart again, where it enters the left auricle or chamber; from that it is sent into the left ventricle, and thence into the great artery called the aorta, and distributed over the whole body by means of lesser arteries which branch off from the aorta.

The whole blood in the system, about twenty-four pounds, passes through the heart and performs its circuit through the body in about a minute and a half.

The contraction and dilatation which are called the beating of the heart, are the cause of the pulse. Every time the heart contracts, it produces a beat in the artery of the wrist, and, in every other artery which proceeds from the aorta. Thus the pulse informs us of the force and activity of the heart, and of the quantity of blood which it throws out at each stroke. By marking accurately the pulse of a healthy person, and comparing it with that of a person in a fever, we are able to discover a striking difference, not only in frequency, but in force and size. In health, the pulse of a middle-aged person is about seventy-two in a minute, moderately full and soft. In a person with a common continued or slow fever, the pulse is not less than ninety, and often a hundred and twenty, in a minute. It is also fuller and harder than in health. In some diseases, the pulse will be small, frequent, and soft, and in others full, frequent, and hard. In some diseases, again, the pulse will be irregular and intermitting, which shows that the heart is irregular in its motion. Since the discovery of the circulation of the blood, the pulse has been considered one of the most certain criterions of disease.

The younger the person is, the quicker will be the pulse.

At birth, the pulse is from a hundred and thirty to a hundred and forty in a minute.

At one year old, from a hundred and twenty to a hundred and thirty.

At two years, from a hundred to a hundred and ten.

At three years, from ninety to a hundred.

At seven, from eighty-five to ninety.

At fourteen, from eighty to eighty-five.

At middle age, from seventy-two to seventy-five.

At old age, from sixty to sixty-five.

CICUTA — Hemlock. — See *Hemlock*.

CLAP — Gonorrhœa. — This disease is produced from an infection communicated from one sex to the other. No certain time has been fixed upon, before it makes its appearance, after the infection has been received. Its usual time of appearance is about six days after the infection has been conveyed. In some cases, the infection will lie dormant a whole fortnight. The disease begins with a sense of heat and itching in the urinary passage, and a feeling of scalding in the discharge of the water. There is a soreness throughout the whole urethra, and an appearance of a whitish matter at the end of the passage. In a few days the matter will be discharged in considerable quantity at every discharge of the water. The parts will look red, and the stream of water will become much smaller than usual, in consequence of the inflamed and thickened state of the lining of the urinary passage. In every attempt to pass the urine, the person feels a great degree of pain, scalding, and heat. Small quantities of blood are sometimes voided, and a stricture produced in the passage, which entirely prevents the discharge of the water. There is a constant running of purulent matter from the urinary passage. The inflammation sometimes ends in ulceration, and the formation of fistulous openings in the different parts of the genital organs. The neck of the bladder becomes irritable, producing a constant desire to void the urine. The foreskin will become so swelled, in some instances, as to prevent its retraction over the glands, and, in other instances, being retracted, it remains tight around it. In slight cases, there will be only a slight heat and scalding in the discharge of the water, and some little narrowness of the passage. If proper care and attention are paid to the disease, it will get well in the course of two or three weeks; but where it is neglected, it will continue for many months, and end in fistulous sores and death.

Where there is any external redness, swelling and soreness, it should be treated like any other inflammation, with emollient poultices and cooling lotions. A soft bread and milk or flax-seed poultice should be applied to the inflamed part, and every time this is removed or changed, a wash of lead-water, or a solution of the white vitriol, should be used. At the same time, the sal nitre, or saltpetre, in six grain doses, should be taken every four hours during the day-time. One drachm of the saltpetre may be dissolved in a gill of water, and a table-spoonful taken four times a day. Of all the remedies which have been at various times, and by various physicians, prescribed for the cure of this disease, this we deem to be the best. It exerts the most power upon the urinary organs, and is the most cooling and friendly. For the first week, we seldom make use of any other remedy than the sal nitre, excepting the external local applications which we have named. In many instances, a daily use of this salt will effect a cure without the help of anything else. The patient in the mean time, how-

ever, must live upon a vegetable diet, drink nothing but cold water or flax-seed tea, and preserve entire continence. The last recommendation is absolutely necessary, and should be strictly fulfilled. If the complaint is not sensibly ameliorated in the course of a week, and the external inflammation has been reduced, an injection of the water of sugar of lead into the urinary passage, made of two grains of the lead to two ounces of water, should be employed three times a day. The white vitriol may be used where the sugar of lead produces too much dryness and heat. If, however, the injection into the urinary passage occasions a weeping of the canal, or increases the discharge of watery matter, it should be suspended. Fifteen drops of morphine, or of laudanum, taken every night, will often lessen the discharge, and incline the disease to abate. The sweet spirits of nitre, in a dose of a tea-spoonful at a time, three or four times a day, answers a similar intention with the sal nitre, though we think its effect upon the disease is much less salutary than the neutral salt.

The balsam of copaiva possesses a high reputation in the cure of this disease, and is, no doubt, often successful. It appears, however, to be more suitable to the chronic state of the disease, or to gleet, as it is called, than in the beginning of the inflammation. A dose of the copaiva, three times a day, has a good deal of efficacy in reducing the disease.

Such will sometimes be the height of the inflammation and swelling as to require the application of leeches, especially where the seminal organs are involved in the consequences of the infection.

The infection produces nearly the same symptoms in both sexes, but, as in the female sex the parts liable to the infection are less complex than in men, it is seldom that they are troubled with strictures, and more stringent medicines may be used. The same general treatment is required in both sexes. In this disease, it is much the safest way to employ the aid of a skilful physician. Mismanagement is always attended with the most baleful effects, which may be regretted through life. In strictures, the water must be drawn off by the catheter, and often the obstruction must be overcome by the use of a bougie, an instrument made of gum elastic, wax, or catgut, of the size of the urinary passage. The caustic bougie has a thin roll of lunar caustic enclosed in it, which eats away the obstruction as it passes along the urinary canal. Catheters, bougies and syringes, suited to both sexes, may always be obtained at the apothecary's store.

There is a disease to which women are liable, very nearly resembling the foregoing, but which is not infectious. This disease is called fluor albus, or the whites, and may be distinguished from the other by the mode of life which the person follows, and other suspicious circumstances.

The cubeb, a species of spice, imported from the East Indies, is peculiarly efficacious in the cure of this disease, in many cases. Emollient bathing of the parts is of the greatest service in the treat-

ment of the disease; this should be done several times a day, and continued for half an hour at a time. In females the disease is in general much lighter than in males, but it is always a dangerous disease in both sexes. Much injury is done in this complaint by unskilful hands, and the use of powerful astringent injections. It should always be recollected that the parts concerned are as sensitive as the eye itself, and require a treatment as delicate. Indeed, any common eye-water is as strong an injection as is generally necessary in the disease, and perhaps nothing better can be used. They are composed of the most suitable materials to reduce the inflammation, and their general efficacy has been most amply tested. See *Cubebs* and *Balsam Copaiva*.

CLAVICLE—Collar-bone.

CLAVUS HYSTERICUS.—A severe pulsating or throbbing pain in the forehead, occupying a space not larger than a nape, which feels as if a nail had been driven into it. The word *clavus*, in Latin, means a nail, and when this pain is associated with the hysterics, it is called *clavus hystericus*, the hysteric nail.

COAGULUM.—A clot of blood, or the curd of milk, is the coagulum. In a bowl of blood drawn from the arm, the coagulum swims in the thin, watery part.

COCUM—*Phytolacca Decandria*.—The medicinal parts of the *cocum* are the roots, the leaves, and the berries. It grows in rich places by the road-side, everywhere in New England, and in the Middle and Southern States. It grows up in long stalks, like Indian corn, and about as high. The leaves are large, oval, and pointed, and grow on short stems. The plant is of a deep-green color. At the joints of the branches, long branches of bluish-colored flowers shoot forth, succeeded by round, flattish berries, full of juice, and of a dark-purple color. The root is large and bulbous.

The properties of the extract or inspissated juice of this plant are emetic and cathartic. In rheumatism, cutaneous diseases, and venereal complaints, it is thought to be an efficacious medicine. One ounce of the powdered root, infused in a pint of new rum, and the whole allowed to stand for a week, makes a good tincture. Two table-spoonfuls will operate as an emetic. Dose of the powdered leaves, from twenty to thirty grains.

COLCHICUM AUTUMNALE—Meadow Saffron.—This plant is a powerful narcotic, purgative, and diuretic. The root is the part commonly used in medicine, but the seeds possess the same properties. Dose of the dried root, pulverized, from four to five grains, three times a day. In rheumatism and dropsy, the meadow saffron has of late been much used. It has an acrid taste, and when taken into the stomach, occasions a burning heat, strangury, and tenesmus, in a small quantity only.

The meadow saffron has been analyzed, and found to contain an alkali, in which all the activity of the plant is concentrated. The alkali is called *veratrine*. It is a white, inodorous, and easily pulverized substance, with an acrid taste, and very soluble in

alcohol. It produces violent vomiting in very small doses. See *Veratrine*.

COLD.—Cold is the common name for influenza. It is always an inflammation, and should be treated like any other inflammatory disorder. It is caused as often by heat as by cold. A person confined in a warm, crowded room will often be seized with a cold without leaving it. The bare heat excites the inflammation, without the least exposure to cold. The lining membrane of the nose, of the windpipe, and of the bronchia, is thickened, red, sore, and often painful. It is first dry, and then pours forth an abundance of mucus. Sneezing is commonly the first symptom of a cold, followed by a stoppage of the nostrils, chills, and headache. This disease is precisely of the same nature with an inflammation of the eyes, the throat, or pleura. It requires abstinence and a cooling treatment. See *Influenza*.

COLIC.—The bilious colic is a disease of much danger. It begins with a griping pain about the navel; with vomiting, and a stoppage in some portion of the intestines. There is thirst, increased heat, and a discharge of bilious matter from the stomach. In violent cases the pulse is small, slow, or unusually frequent; the face is pale, the features shrunk, and the whole body covered with a cold sweat; and the feet and legs will often be cold while the head is hot. In some instances the pulse will not be much quickened. There is great pain in the lower part of the belly.

Remedies.—Blood-letting is a remedy of so much importance in the true colic, that not much can be safely done until this operation is performed. If the pulse is active; if there is soreness at the pit of the stomach and about the navel, with a foul tongue, nausea, and headache, blood should be drawn in proportion to the violence of the disease. It should not be forgotten that the neglect of blood-letting in this disease is often attended with fatal consequences. The disease will sometimes require two or three bleedings before a remission of the symptoms will take place. If the blood is drawn by leeches, they should be put on plentifully, not less than a dozen and a half at a time, and repeated every twenty-four hours, for three or four days, if the disease does not yield before.

If there is much sickness at the stomach the bowels must be operated upon by injections. For this purpose, a tea-spoonful of ipecac. may be infused in half a pint of warm water, or six grains of tartrate of antimony may be dissolved in the same amount of warm water. The ipecac. and the antimony, when used by injection, have a similar relaxing effect as when taken by the stomach. Two great spoonfuls of spirits of turpentine, with as much castor-oil, mixed with half a pint of warm molasses and water, have often been found a very effectual injection. The thoroughwort tea also makes a very good injection in these cases. The sickness at the stomach and vomiting must be allayed by effervescing draughts, to which twenty-five or thirty drops of laudanum are added. As soon as the stomach is in any measure quieted, four

or five grains of calomel should be given, in the form of a pill, every two hours, until it removes the stoppage. Calomel, when given in small doses, is much better retained and much surer to operate than in large doses. The Croton oil is a purgative of great power, and often succeeds where other cathartics fail. The best way of giving it is in a dose of a drop at a time, made into a pill with a crumb of bread or a little manna, and repeated every hour until it operates, or until five or six drops have been taken. A mixture of equal parts of spirits of turpentine and castor-oil, in a dose of a great spoonful at a time, repeated every hour until it operates, or until five or six spoonfuls have been taken, will sometimes answer as well as the Croton oil. Some give the spirits of turpentine alone, to the amount of half a wine-glassful at a time, mixed with a little molasses and water. Where there is no vomiting, Lee's pills, the compound infusion of senna, the elixir salutis, or an infusion of senna, will succeed in removing the stoppage. The mild cathartics should always be tried first, since it is of no little importance to irritate the bowels as little as possible. In one case of the bilious colic, after the Croton oil and the spirits of turpentine had been tried, in the way we have recommended, and bleeding had been carried to the extent which we thought advisable, the obstacle was removed by a tea made of a scruple of the common tobacco, and given in two doses. It is, however, a safer way to give the tobacco by injection. A plaster made of snuff and lard, and laid upon the bowels, or pit of the stomach, has a very relaxing effect.

The warm bath is sometimes found very effectual in producing a relaxation of the bowels, especially when used immediately after bleeding. In all cases, the stomach and bowels should be fomented with warm water or boiled herbs, particularly the heads of the white poppy. Some physicians have advised cold affusions, but these are very doubtful means of cure, liable to be followed with more of mischief than of good. The drinks should be toast-water, cream of tartar water, tepid water, and herb teas, such as balm and sage. Where the stomach is not much disturbed, the tartar emetic, in small doses, given every hour, will often move the bowels. The same dose may be given here as in fever. Sleep should be procured every night by an anodyne injection. A tea-spoonful of laudanum, in half a gill of the solution of starch, or of flax-seed tea, will commonly answer this purpose. In giving an anodyne injection, or one which we wish to stay in the bowels, we should always introduce as small a quantity as will answer the purpose, as the mere bulk of any liquid, of itself, will often excite an action of the rectum, and so defeat our object.

In some cases of the colic, the motion of the bowels is so completely inverted, that the fæces are thrown up by the mouth, and whatever is given by injection is returned in the same way. This is always a distressing sight. In the bilious colic there is nothing but bile and the ordinary contents of the stomach thrown up, but in the *ileus*, or the *iliac passion*, the contents of the lower portion of

the bowels are discharged by vomiting. This kind of colic is often without fever. The muscles of the abdomen will be contracted and drawn inwards; there will be an insufferable pain about the lower part of the belly, at stated intervals; a dying sickness at the stomach; a sense of twisting and wringing of the intestines at the navel; and a leaden hue to the countenance.

In this species of the disease, on dissection of the body after death, one portion of the intestinal canal is often found run into the portion below it, so that the part which receives the upper portion is effectually blocked up. It is named intorsusception. The same treatment is to be pursued as in the bilious colic. The colic differs from cholera morbus and dysentery in this, that the colic is a stoppage and inflammation of a small section of the bowels, and the cholera morbus and dysentery are diseases of a large portion, or of the whole bowels. The cholera morbus and dysentery are confined to the mucous membrane, whereas the colic appears to be an inflammation of all the coats, or of the whole substance of the bowels. In colic, all the coats are found constricted and often ulcerated.

A colic resembling the iliac passion is often produced by a rupture of the bowels. The bowel becomes choked or strangulated by being crowded into the rupture. In these cases, the bowel must be put back or reduced; and if this cannot be done, an operation must be performed, and the bowel put back by the hand of the surgeon. In all cases of the colic, it will be prudent to inquire whether the patient is afflicted with a rupture, as people who have ruptures are often affected with colic or a stoppage. In the *iliac passion*, as in the bilious colic, bleeding, fomentation, blisters and poultices upon the abdomen, injections, and, after the stomach is quieted, cathartics, anodynes, to procure sleep, and to ease the pain when it becomes intolerable, are the means to be prosecuted. Latterly, it has been the practice to introduce a long gum elastic tube into the rectum, and to force warm water through this into the colon, and even beyond it, by means of a force-pump, or a syringe made upon the principle of a force-pump. Sometimes the syringe is used alone. Several quarts of warm water can in this way be thrown up the bowels, and even forced beyond the valve of the colon. This remedy should never be omitted, as it can do no harm, and may possibly force up the portion of strangulated bowel. The giving of crude quicksilver, with the view of forcing a passage mechanically, we believe to be generally condemned. A colic will sometimes go on for seven or eight days, in spite of all remedies, and, then, all at once, give way and the bowels be set loose.

The painter's colic differs, with respect to its cause, from the bilious colic and the iliac passion, but requires the same treatment. The paint, lead, or putty, produces an inflammatory constriction of the bowels, which is the same in its nature with the other kinds of colic, and indicates a cure by similar means. Alum has been given with success in the painter's colic. A

table-spoonful of the powdered alum is swallowed at a time, mixed with molasses or jelly. This substance has been supposed to neutralize the lead by a chemical combination.

When the colic is occasioned by wind, it is not a very dangerous disease, although it may be very painful and distressing. There will be a temporary stoppage of the bowels, sharp pain, and swelling about the pit of the stomach and the navel. The noise of wind passing from one portion of the bowels to another can be distinctly heard; and there will be more or less sickness at the stomach. The slightest discharge of wind from the stomach or bowels is attended with some relief. The pent-up wind produces great distention of the stomach, and the distention of the stomach produces great distress. There will be a constant turning of the body, first upon the stomach and then upon the sides and back.

Where the colic follows upon eating a hearty meal of some indigestible food, an emetic should be the first thing given, to unload the stomach. The wind colic is often produced by eating unripe fruit and vegetables, and, sometimes, in eating too large a quantity of those which are ripe. There are certain kinds of fruit and vegetables, which, in particular individuals, always produce the wind colic, such as cherries, currants, cucumbers, and cabbages. When the colic has been produced by any of these articles, or by anything else which has been taken into the stomach, vomiting should be excited and the offending substances removed. If an emetic does not entirely relieve the difficulty, a dose of oil, salts, aloes, or some other cathartic, should be forthwith administered. In some cases, where there is no sickness at the stomach, ten or fifteen drops of the essence of peppermint, in a little hot water, or a great spoonful of brandy, will be sufficient to expel the wind. Hot pennyroyal tea, or even hot water, drank plentifully, or hot ginger and water, will remove the colic. Paregoric seldom fails to procure relief. Children can take from ten drops to a tea-spoonful. Half a tea-spoonful is a medium dose for a child a year old. Dry, hot flannel cloths should be put to the stomach, and a bottle of hot water, or a hot brick, to the feet. In children, where the distress is great, an injection made of common salt, dissolved in warm water, will often procure the most instant relief. Nursing children are very subject to this kind of colic, which is often so severe as to produce a cold sweat. Half a tea-spoonful of castor-oil, and half a tea-spoonful of paregoric, mixed, will generally be found to remove it.

COLLYRIA—Eye-waters.—One of the best eye-waters is composed of one or two grains of white vitriol, dissolved in an ounce of rose-water, or rain-water.

COLOCYNTH—Bitter Apple—*Cucumis Colocynthis*.—This medicine is imported from Turkey. It is commonly called the bitter cucumber, or the bitter gourd. The medicinal part of the plant is the fruit, which somewhat resembles the cucumber. Its taste is nauseous, acrid, and intensely bitter. It is a powerful

purgative, and, in a dose of ten or twelve grains, frequently produces gripes, bloody stools, and pain. Where milder cathartics have proved unsuccessful, the colocynth is sometimes used, but is commonly mixed with other medicines. It forms a part of the pill cochixæ. The proper dose for an adult is from three to six grains. The dose for a child two years old is half a grain. It is the pulp or pith of the fruit selected for use.

In obstinate stoppages of the bowels, in insanity, and in lethargies, it is often more successful than other purgatives.

COLON.—This is the name of the greater portion of the large intestine. It commences in the right side of the lower part of the abdomen, ascends to the liver, crosses the backbone, to the left side, passes under the stomach, and pursues a course like the letter S down into the pelvis, where it ends in the rectum.

COLTSFOOT—*Tussilago Farfara*.—The medicinal parts of this plant are the leaves and flowers. It is found in moist places, and flowers in March and April. It is used in coughs and affections of the mucous membrane of the windpipe and lungs. In the form of candy it is a very useful remedy for a slight, tickling cough. It is glutinous and somewhat acrid.

COLUMBA ROOT.—The columba root is brought from the Island of Ceylon. It comes to us in small round pieces, composed of the bark and wood. The wood is of a bright yellow color. The root has an aromatic smell, and a pungent, bitter taste. Steeped in water, it affords an agreeable bitter. Alcohol dissolves it more perfectly, but this preparation is more healing than the watery infusion. The dose of the powdered root is half a drachm. A table-spoonful of the tea, made of an ounce of the root steeped in water, is an excellent tonic in dyspepsia, weakness of the bowels, and in low fevers. It produces no heat, while it gives tone to the stomach and strength to the system.

COMA—Lethargy.—A strong propensity to sleep, resulting from disease.

COMFREY—*Symphytum Officinale*.—This is a common New England plant, which grows in moist places, and rises to about two feet in height. The leaves are large, and similar to those of the water dock. The root is much esteemed among many people for coughs and catarrhs. It contains a mucilage, and promotes expectoration. It can be made into a syrup and taken several times in the course of a day.

CONSUMPTION—*Phthisis Pulmonalis*.—Consumption is an affection of the lungs, attended with a cough, the raising of purulent matter, and a habitual or hectic fever. The habitual or hectic fever is sometimes very slight, and, at other times, very severe. The more rapid the ulceration of the lungs, the more aggravated, in general, will be the fever. In the quick consumption, as it is called, the hectic fever consumes the powers of life exceedingly fast. By consumption, we do not mean that the substance of the lungs is always consumed, but that a process always goes on of forming pus, which is accomplished either by the de-

struction of the substance of the lungs, or by an inflammation of the mucons membrane, in consequence of which pus is secreted instead of mucus. It is sometimes difficult to distinguish between the mucus or phlegm which is raised in a severe and long-continued influenza, or catarrh, or cold, as it is called in common language, and pus or purulent matter raised in a consumption. But mere mucus or phlegm is commonly clear or transparent, like glass, but pus or purulent matter is white and opaque, that is, the light does not pass through it. Phlegm or mucus is also tough, and coheres together very strongly, but pus is more brittle, and easily separates into particles. Pus is a thicker and more solid substance than phlegm. Pus, when thrown into water, commonly sinks, but phlegm or mucus swims upon the top. Pus has a more greenish color than mucus, though mere mucus will sometimes have something of this color.

The most certain mark of an ulceration of the lungs is the existence of the habitual or hectic fever which always attends it. This fever is not constant through the whole day and night, but comes on twice a day, and has two abatements. The person begins every day about noon to feel some little chilliness, but not amounting to an ague fit. This soon passes off, and the person becomes hot, thirsty, restless, and the perspiration ceases. About five o'clock in the afternoon, the fever abates and ends in a perspiration. The same thing occurs about midnight, and is commonly more severe. The fever is terminated by what are called night sweats, but these sweats are the result of the previous fit of fever. The tongue, in this fever, is not apt to be much furred, and the appetite will often be tolerably good, especially during the remissions. In the latter stages of the disease the tongue and entrance of the throat will become inflamed.

Upon each cheek of a consumptive person there will be, during the existence of the fever, a bright red spot, nearly circular. The whites of the eyes will be bloodless, and almost shine like a piece of polished marble. In the progress of the hectic, a diarrhœa comes on, and the nails become rounded and hooked, like the claws of a bird. But the most remarkable feature of a consumption is the wasting away of the flesh, which sometimes diminishes to such a degree as to leave nothing but the skin upon the bones, and even the bones themselves appear to have shared in the general waste. Towards the last, the feet and legs will be affected with dropsical swellings.

Another remarkable feature of consumption is the general soundness of the mind through the whole course of the disease. Both the senses and the judgment commonly remain clear to the end; and the spirits are often remarkably good, and even more elevated than in health.

The existence of ulceration in the lungs is now ascertained with an increased degree of accuracy by an instrument called a stethoscope, formed so as to convey the sound produced in breathing more audibly to the ear. By first ascertaining, by the use of this

instrument, the peculiar sound which is made by the breathing of a healthy person, all the deviations from this sound produced by disease can be determined.

When a tubercle exists in the lungs, and has discharged its contents, the air, in passing in and out of the cavity which remains, produces a peculiar sound, which the French call *râle*, a deep, cavernous kind of rattle, which can be detected by placing the ear upon the chest, but very distinctly by the stethoscope. This instrument assists the ear in detecting the diseased sounds produced by breathing, in the same way that the ear-trumpet assists the hearing of a deaf person. Tubercles and ulceration can sometimes be detected in the lungs by merely tapping the fingers upon the chest. In a healthy state of the lungs the sound will be comparatively clear and elastic, but when tubercles and ulceration exist it is dull and heavy. Whenever the *râle*, or deep hollow rattle, has been heard, either by the ear or the stethoscope, it has been found, after death, that an ulceration had existed, and that the sound was produced by the passage of the breath in and out of the cavern which was left after the matter of the ulcer or tubercle had been expectorated.

In many cases of cough and expectoration, it is difficult to determine, by the quality of the matter raised, whether ulceration actually exists or not, but by the use of percussion and auscultation, or the stethoscope, the case may be decided with a great degree of certainty. Many people who, for a long time, have labored under serious apprehensions of some fatal pneumonic affection, or of consumption, have been relieved of all fear by the intelligence conveyed by the stethoscope. Where much anxiety exists as to the nature of the disease, or its actual progress, the person should submit himself to an examination by this new instrument.

After a tubercle of the lungs has ulcerated, and been emptied of its contents by coughing, a reverberation of the voice is heard in the empty tubercle, and has been called *pectoriloquism*, from the resemblance which the sound has to ventriloquism.

Consumption is the result of several different affections of the lungs. The most common affection of the lungs, which ends in consumption, is the formation of tubercles. The tubercle is a small, globular body, which, in its origin, is not larger than a millet seed, but will increase to the size of a nutmeg; and when it proceeds to suppuration is often as large as a crow's egg, and sometimes becomes as large as a hen's egg. Its substance resembles cheese, or tallow; it is white, and contains no blood-vessels. The lungs will sometimes be nearly covered with them. They are supposed to be the same thing with scrofulous tumors which affect the external glands of the body. The matter of both, in their origin, appears to be very much alike; they both commence small and hard, and proceed to suppuration very much in the same way. The upper part of the lungs, under the clavicle or collar-bone, is much oftener the seat of them than the lower part. They

do not always suppurate, but will sometimes lie dormant during the person's whole life. Tubercles appear to be excited to inflammation by influenzas or colds; by asthma; by hemoptysis; by peripneumonies and pleurisies; by the breathing of foul air and noxious gases; by excess of living; by paucity of living; by over-exertion in labor or exercise; by intemperance in drinking; or by the gratification of the animal passion; and by all the causes which disease the lungs in general.

Ulceration of the lights, or consumption, is sometimes the consequence of spitting blood. Bleeding at the lungs does not, however, always produce ulceration. Many people will bleed at the lungs a number of times in succession, and will entirely recover from it, while others will go on, from one step to another, until a confirmed consumption develops itself. It is probable that bleeding may take place at the lungs as it does in other parts of the body, and the vessels from which the blood proceeds heal as readily. But as consumption often succeeds hemorrhage from the lungs, nothing should be neglected, in such cases, to restore the ruptured vessels to a sound state. It is impossible to foretell the instances in which hemorrhage from the lungs will recover, although in sound constitutions we may rationally look for more recoveries than in those which are unhealthy, especially in people of a known scrofulous habit. When bleeding from the lungs is produced by accidents, such as falls, blows upon the chest, and concussions of the whole body, a healing of the lungs generally takes place. Pistol-balls and rifle-balls have been shot through the lungs, and still those organs have healed, and remained as sound through life as though no such accident had befallen them.

Consumption is not unfrequently the consequence of peripneumony and pleurisy. An inflammation of the lungs and of the pleura takes place from cold or other causes, and if not subdued in time, a suppuration will often ensue. In these cases, however, if the constitution be good, and the blood in a pure state, the abscesses will not be followed by hectic fever, but will gradually heal and the lungs become sound again. It is not every abscess of the lungs, therefore, that produces consumption. Abscesses will sometimes form in the pleura,—the membrane which invests the lungs,—and be absorbed. It is probable that an abscess which arises from hemorrhage, from peripneumony, and from an irritation of an asthma, may sometimes heal and leave the patient in perfect health; but it is not so probable that an abscess which proceeds from a tubercle will ever heal. There is something, in those constitutions which produce tubercles, which also produces a kind of suppuration exceedingly unhealthy. In all other kinds of suppuration there will often appear some tendency to healing, but in this the matter forms and is discharged, and just so much of the lungs as the tubercle occupies is destroyed; another and still another tubercle goes on to suppuration in the same way, until so much of the lungs has been successively destroyed as to leave not enough for the purposes of supporting life.

Influenza, cold, or catarrh, — for they all mean the same thing, — is probably the cause of consumption in many instances. A bad cold, long continued, and attended with cough and the expectoration of phlegm, will finally excite some portion of the lungs to inflammation and suppuration, and will produce the hectic fever. It is rather to be wondered at, however, when we consider how many colds and coughs people undergo, that so few of them end in phthisis pulmonalis. Consumption is sometimes occasioned by the measles, whooping cough, the asthma, the syphilitic disorder, and the small pox; these diseases should, therefore, always be cautiously treated, on account of the tendency which they leave to a more fatal disorder.

Phthisis pulmonalis most commonly appears in the young between the age of sixteen and twenty-five. It will sometimes appear at an earlier period, but the cases are seldom. Whether it happens from hemoptysis, pneumonic affections, or tubercles, its victims fall about the same age. When the consumption arises from tubercles, it usually commences with a slight, short, tickling cough, which seldom gives the patient much uneasiness. The cough soon becomes habitual, and the person loses his flesh. The breathing becomes hurried by any bodily motion, and the patient becomes languid and disinclined to all exercise or motion. He takes cold more easily than common, and coughs and raises more. This condition of the person may continue a year, or even two years, before decided symptoms of hectic fever set in. When the cough arises from tubercles, it will remain dry for a long time, but at length will be accompanied with an expectoration of a tough mucus or phlegm. From phlegm or mucus, the matter which is raised by coughing imperceptibly becomes purulent. While the cough and the expectoration are increasing, the breathing becomes shorter and more frequent, the pulse quicker, and, at length, the most unequivocal symptoms of the hectic make their appearance. In the female sex, sometimes, very early in the disease, the menses cease to flow; and it should not be forgotten by the friends of the sick, nor by practitioners of medicine, that this is the effect and not the cause of the disease. By attempting to cure it, we only attempt to cure a symptom, and not the disease. The strength of the patient should never be wasted by fruitless attempts to reëstablish this function, which can only be done by removing the consumption itself.

Subsequent to the cough and the appearance of fever, more or less pain begins to be felt in some part of the chest, generally under the sternum or breast-bone, but often in one of the sides. The pain becomes more evident by drawing in a full breath, or in lying upon one or the other of the sides. Most people in this disease can only lie on one side, or on the back. Whether the disease has been preceded by hemoptysis or not, it is very rare that it progresses to the end without more or less appearance of blood, either in a pure or mixed state. When the disease proceeds from tubercles, the spitting of blood is rare.

If a consumption arises from a peripneumony or influenza, we may have some hope of its being cured; or if it proceeds from a hemorrhage of the lungs, we should never despair of a cure; but where it comes on with a dry, husky cough, emaciation of the body, indisposition to motion, and the other symptoms which show a tuberculous state of the lungs, our hopes of a recovery will almost always be disappointed, although instances have occurred of a complete restoration to health in this form of the disease.

The belief that people never recover from a consumption we conceive to be superstitious and absurd. There is no more difficulty in the healing of a tubercle in the lungs, than of the healing of a scrofulous tubercle in any other part of the body, provided the lungs and the general health are in the right condition. Nor do we despair of the discovery of remedies which shall yet reach and subdue this hitherto fatal disease, and render it as curable as the fever and ague, or the syphilis. We believe the remedy for this disease will come in the form of a gas or vapor, or of some impalpable powder, which shall be breathed into the lungs and operate locally upon the ulceration. The inspiration of some of the gases, many years ago, received a partial trial under Dr. Beddoes; but this single trial of the gases then known, and of their combination, was very far from settling the question, whether any substance inhaled into the lungs can cure ulceration there. There are ten thousand substances which may be introduced into the lungs. The lungs will bear an immense quantity of impalpable powder, without even exciting a cough, as we know from breathing the dust of roads and streets when it has been ground to an impalpable powder, raised in clouds, and diffused through the atmosphere. In the form of vapor, hundreds of medicines, hitherto untried, can be made to reach the seat of the disorder. New gases will probably be discovered, and essential improvements made in the administration of those which are already known. We have conceived that the inhalation of the impalpable powders of lead, and of other substances used by painters, prevents that class of people from having the consumption as readily as other people, but have not as yet been able to settle the question by a competent number of facts. In a hemorrhage from the lungs, breathing the impalpable powder of the oxides of lead would doubtless be as good an application as could be made to a bleeding surface. If it should be ascertained that painters and others, who are constantly subject to the inhalation of the impalpable powders of lead and other substances, are exempt from hemoptysis and consumption, or comparatively exempt from them, it will furnish a foundation for the trial of these substances in the cure of those diseases in others. Calomel, applied externally to an ulcer, in the form of powder, possesses great power in restoring a healthy action. It is highly probable that this or some other substance, rightly applied to the ulcers which form in the lungs, may yet be found to arrest their progress, and excite in them a healing process.

Consumption, by many, is thought to be, in some situations and circumstances, a contagious disease; but whether this is ever the case or not, prudence will dictate the propriety of not sleeping with a patient in its last stages, and of not allowing children to remain in the same room with aged people who are affected with it.

Domestic Remedies.—It is of essential consequence, in the consumption, or in the commencement of those symptoms which threaten it, to adopt such a kind and quality of dress as will most effectually secure the person against the changes of the atmosphere and of the seasons. Atmospheric changes have a great agency in inducing the disease, and in hastening its progress when it has once commenced. A shirt made of wash-leather, and constantly worn next to the skin, and stockings made of the same, have probably saved many a person, in our climate, from the grave. The invention of India rubber shoes deserves to be commemorated through all time. They should always be worn in cold and wet weather, by people who are subject to a cough and to cold feet. No change of fashion should induce consumptive invalids to lay them aside. To some people they may be a little uncomfortable, on account of their tendency to excite a perspiration in the feet, but this is no real objection to their use. As soon as the weather becomes warm and the earth dry, they may be left off with impunity, but should be resumed as soon as the weather becomes cold and wet in the autumn. The expenditure of animal heat is an expenditure not only of the vital powers, but of the healing powers of the system. To husband the animal heat properly, requires no small degree of attention. Besides the leather shirt and the leather stockings, which can be purchased at any of the apothecary stores in our large cities, flannel drawers and a great coat or cloak are none too many clothes to be worn in the cold season, which commonly lasts from the first of October to the first of June.

The diet of a person who has any tendency to phthisis pulmonalis should be confined chiefly to vegetable food. Everybody knows that vegetable food is less feverish than animal food; in other words, that it is much less liable to create heat, thirst, and uneasiness. It softens the pulse and opens the body. We once attended a young man, of about twenty-four years of age, whose family had all died of consumption, and who had several times bled at the lungs;—he was left with a cough, and otherwise manifested the peculiar symptoms of an incipient consumption;—who lived a whole year upon codfish and potatoes, and hulled corn, with a little sugar and milk upon it, by which he arrested the disease, and is now, twelve years since, a well man. A diet of wholesome, nutritious vegetables will cure the scurvy, and correct a putrid state of the fluids and solids; it must, therefore, in general, give a healthy tone to the whole system. If vegetables cause scorbutic sores to heal, we may rationally expect them to promote the healing of tuberculous ulcers. We have known several, who have been threatened with consumption, to live for months upon hominy and molasses, and by this means

avoided the disease. Dr. Cullen and others formerly placed their whole reliance, in the cure of consumption, upon a vegetable and milk diet, but we think that patients, in general, will stand a better chance of recovery without the use of milk. Milk may benefit some constitutions, but where there exists any degree of fever it will be very likely to increase it. The vegetables most suitable for the aliment of consumptive people are potatoes, cabbages, turnips, beets, hominy, hulled corn, rye and Indian bread, rice, parsnips, asparagus, coarse wheat bread, buckwheat cakes, Indian cakes, apples, peaches, pears, grapes, and, in fact, all the nutritious and easily digested vegetables which grow in our climate. Where people are obliged to labor, in order to live, it will, perhaps, be necessary for them to adopt somewhat of an animal diet; but where this is the case, meat should not be used more than once a day. Salted codfish is, in general, as innocent as vegetables, and may be eaten as freely. Cheese is more innocent than milk, and may, where it agrees with the digestion, be eaten with impunity. Eggs are less feverish than meat, and more nutritious than vegetables; they should be eaten where vegetables alone do not sufficiently nourish the system. Honey is a nutritious and wholesome article, which ought to be used instead of butter. It is less of an animal substance than either milk or eggs, and yet it cannot be considered entirely vegetable. Molasses is also nutritious and healthy, and may be made a substitute for either cheese or butter. New butter is much more healthy than old, and may be allowed where the taste absolutely requires it. But to render a vegetable aliment efficacious, it must be persevered in for a considerable length of time. The solids and fluids must be renewed by it. We do not recommend a spare diet, but, on the contrary, would advise rather a full diet, but to be composed chiefly of vegetable substances. Even this disease may be induced by too spare a diet, or by the use of food which has been damaged or decomposed. Deficiency of aliment disposes the human body to unhealthy sores and many serious disorders. The appetite, corrected by personal observation and experience, will, in general, be a safe guide as to the amount of aliment to be taken. Oysters, lobsters, turtles, clams, and shell-fish in general, may be eaten, where the strength of the system appears to require them, but should always be taken in moderation. All kinds of fish which are not of an oily nature are more suitable than meat. Shad, herring, tautog, scup, eels, and trout, are probably less heating and feverish than even milk or eggs. Mackerel and the gray fish in general, being of an oily nature, constitute an unsuitable aliment in cases of local inflammation and ulceration, whether in the lungs or any other part of the system.

Next to clothing and aliment, exercise is of the most consequence in the treatment of consumption. In our country, in nineteen cases out of twenty, any inducement to exercise is unnecessary. By far the greatest part of our people are either farmers, mechanics, or men in some active business, who need

no other spur to exercise than necessity or ambition. There are, however, a considerable class in our cities, particularly of the female sex, who suffer for want of that constancy and degree of bodily exercise which are essential to health, and to the full development of all the animal organs. The steady, constant labor to which all our farmers and mechanics are subject, is exceedingly favorable to health and to the development of the full capacity of every organ; and there can be no question but that consumption is much less frequent among them than among the professional and wealthy classes. No estimate has hitherto been made between the people of country towns and the cities, as to their liability to consumption; but when such an estimate comes to be made, it will be found that country people, who follow an active life, are much less liable to it than the inactive inhabitants of cities. There is, probably, no life in the world more favorable to health, in general, than that of an American farmer. He is, in general, temperate; his food is of the best kind; the air he breathes is pure and salubrious; his sleep is sound; his anxiety as little as it well can be in this life; his liability to excitement, either political or religious, much less than in the cities and manufacturing towns, and his situation and occupation are every way calculated to compose, to cheer, and to strengthen his mind. We would advise, therefore, all those who can be at all contented in a country town, on the first approaches of consumption, to take up their abode there. The change of scene, as well as the opportunity for agreeable and suitable exercise, will have the most favorable effect upon the disease. They will be in the midst of the vegetable world, with all its beauties, and all its medicinal powers. The sleep of the farmer is one of the most salutary and enviable enjoyments which life in any situation can afford. This is a function of the brain, and the regulation of it is of scarcely less importance to the enjoyment of health than that of digestion or of respiration. No healing process can go on well, without sound, refreshing sleep. It matters but little whether a person take exercise on horseback, in a carriage, in walking, or in some kind of work, provided it be uniform and constant, and carried to such a degree as to feel a slight fatigue every night when he goes to bed. In the last stages of consumption exercise is of little or no service. Occupation and labor have furnished more instances of cure, in consumption, than riding, walking, or any of those kinds of exercise which are pursued for amusement and recreation. See *Exercise*.

In some instances of chronic phlegmesia of the lungs, exercise is painful, and probably tends to aggravate the disease. The lungs, in such cases, are too extensively inflamed to allow of any acceleration of the motion of the blood, and rest, conjoined with social amusement, is required as a matter of necessity.

Change of situation, of air, and of climate, has an important effect upon the disease of the lungs. Where the consumption is

induced by the depressing passions, as it often is, a mere change of situation from one town to another, and from old associates and associations to new ones, will often work an agreeable alteration in the spirits and the disease. The winter season of our climate is supposed to be very unfriendly to the cure of consumption; and it is thought, if consumptive patients could only live in a perpetual summer, they would generally recover. But it has been pretty well ascertained that people die of this disease in all parts of the earth, in the hottest as well as in the coldest climates, and in the most temperate as well as in the most inclement parts of the globe. The temperate and the equatorial parts of the earth, however, are much more exempt from the consumption than the cold and frozen regions. All the northern countries of Europe and America are remarkably productive of this disease, and no country more so than the islands of Great Britain. In the early stage of consumption, if a person can remove to some one of the West India Islands, and remain there until the lungs have become sound, or if he can winter there as long as the disease continues, it will always be advisable to try the change; but it answers little or no purpose to pass a single season there, unless the health becomes entirely reëstablished. A long voyage to sea has, in some instances, been the means of recovery, and none is more likely to be productive of this effect than a whaling voyage to the Pacific, if made in the incipient stage of the disease. Some have supposed a salt air unfavorable to the healing of the lungs, as it naturally tends to excite a cough. The sea air may have something of this tendency, but hardly enough to counterbalance the good effects of a warm, uniform temperature, and the greater degree of purity which the sea atmosphere in other respects possesses. In some cases, the salt in the atmosphere may have a salutary effect, especially if it does not aggravate the cough. A small quantity of salt, applied in solution to an inflamed surface, would be as likely to promote a healthy action as to excite inflammation. It is probable, however, that, where the air is highly charged with salt vapor, it has a tendency, like the diffusion of any other foreign matter in the atmosphere, to aggravate a cough. But still it must be recollected that the sea air does not excite a cough in well people, or in those whose lungs are sound. The salt air, therefore, can have no great tendency to irritate the lungs.

It is the opinion of many, that those districts of country which are most infested with fever and ague, or the bilious fever, are most exempt also from phthisis pulmonalis, and, therefore, that these places are the most suitable residences for consumptive people. From all the information which we can collect upon this subject, we are inclined to think that the valley of the Mississippi and the states beyond the Alleghany Mountains are less productive of the consumption than the Atlantic states, or any of the states on this side of the Alleghanies. The northeast winds are cut off by these mountains, and the southerly and southwesterly

winds are known to prevail more beyond them than on this side. Spring is estimated to be two or three weeks earlier, in the same latitude, in the State of Ohio, than it is in New England, and the cold season is much drier and warmer. The States of Alabama and Mississippi are, probably, the best places in the United States for a winter residence, in cases of a consumptive nature. There, the invalid is equally removed from chilly northeast winds and from the ocean air.

The sulphur springs in Virginia are well worth a trial by those who are apprehensive of a hectic tendency. The Saratoga waters have not, in general, been found productive of much benefit. Change of scene, to be sure, does something, but the scene can be as well changed by going to some other place as to Saratoga. Travelling, unless people can be entertained and amused by it, and unless they can sleep better at night than they can at home, is of no service, and had better be abandoned.

The great mass of people who have the consumption can neither go a voyage to sea, nor make visits to foreign climates, nor change their residences to other parts of the country, and can rarely take any other exercise than what is performed upon foot, or in their ordinary occupations; nor can they experience any other change of scene than what chance, or friendship, or sympathetic kindness, throws in their way; and, perhaps, after all, they are not so much the losers by their situation as they are apt to imagine. Almost every change is an experiment, which may hasten, as well as ameliorate, the disease. Some consumptive patients, who have sought health in foreign climates, have come to their death by accidents, or by some other disease than the one they sought to cure. There is, besides, a solace in home, be it ever so humble, when one is sick, which can never be found abroad.

During the cold season, where cold is found to aggravate the cough, a very good climate can be made within doors. Such have been the improvements in stoves, and the means of warming houses and the rooms of the sick, that an artificial temperature can be produced, quite equal in evenness to the temperature of the West Indies or the south of Europe. So far, therefore, as a dry, warm, even temperature is concerned, it can as well be obtained at home as abroad. We would not, however, throw any discouragement in the way of those who have the desire and the means to go abroad.

The most effectual remedies in the cure of cough are opium and emetics. In all cases where there is a tickling, dry, hacking cough, the person should take twenty or twenty-five drops of laudanum, or the same quantity of the solution of sulphate of morphia, every night. The morphine is preferable, where there is an inactive state of the bowels, but in other cases the laudanum will have the best effect. If this does not remove the cough and regulate the breathing, an emetic of ipecac. should be taken, every day, until the desired result is obtained. If ipecac. cannot be ob-

tained, an infusion of lobelia, or a great spoonful of powdered alum, may be used in its stead. A daily emetic has been productive of more good, in the early stages of consumption, than any other medicine or means which have ever been used. It may be used at any stage of the disease, when it is not attended with active hemorrhage, or too great a degree of debility. In the last stage of tubercular consumption, neither this nor any other remedy, as yet known, will probably have any permanent effect. Mucilaginous drinks, such as flax-seed tea, slippery-elm tea, and a solution of gum arabic, will be found serviceable in ameliorating the cough, and promoting the expectoration, but will exert but very little influence in arresting the progress of the disease. The lac ammoniac, made by grinding two drachms of the gum ammoniac in a mortar, and gradually pouring on half a pint of hot water, is an old, but very excellent, cough medicine. This milky emulsion is taken in table-spoonful doses, three or four times a day.

Where there is pain and soreness in the chest, large blisters should be drawn, and repeated as long as there is any chance of being serviceable. Large pitch plasters, placed between the shoulders, serve to keep the chest warm, and exert some influence upon the lungs. The syrup of squills, liquorice, the balsam of tolu, and the hive syrup, promote the secretion and the raising of the phlegm, and are often of essential service in relieving the distress in breathing. A syrup made of the root of the burdock will often afford much relief. A tea made of the leaves of the white hoarhound, and sweetened with honey, is one of the best cough medicines in use.

Should the disease be attended with a diarrhœa, a tea made of the ground logwood should be given two or three times a day; and, where this cannot be obtained, a strong decoction of the hardhack should be tried.

Professional Remedies.—Broussais terms consumption a chronic phlegmasia, or inflammation, and prescribes the same treatment as in other chronic inflammations. He enjoins leeching and setons. There can be no doubt of the propriety of leeching in the early stage of the disease, where there is pain, soreness, and a pulse which will warrant it. Leeching should always receive a fair trial; but setons are more doubtful remedies. We have never seen any benefit from them, or known of any from the practice of others. In the exhibition of emetics, especially of ipecac., we have more confidence than in all other remedies put together. Thirty grains of the ipecac. should be given in a powder, mixed with molasses or syrup, every day, for twenty or thirty days in succession, if the disease does not yield before that time has expired. The sulphates of copper and of zinc have sometimes been used as vomits in this disease, but, in our estimation, they are inferior to the ipecac. We gave the ipecac., in one instance, to a patient who manifested every symptom of consumption, and continued it every day, for four weeks; at the end of which time, to the great surprise and gratification of his

friends, his lungs were restored to soundness. In another instance, we saw it administered, by another physician, in the same way, where it suspended the disease for two years.

The tartar emetic, applied in the form of powder, or of a cerate, to the surface of a blister upon the chest, has sometimes been attended with the happiest effect in a long-established cough. The tartar emetic produces small boils or tubercles, wherever it is applied to the denuded skin, and, in this way, imitates the process going on in the lungs; and if any diversion of the disease can be effected, this seems the most likely way of accomplishing it. It is a kind of a "*similia similibus*," which imitates nature as closely, probably, as she can be imitated.

The iodine has received many testimonials in its favor, in the tubercular consumption, and is entitled to a fair trial. Where the digestive organs are impaired, and the fever will admit of it, the Griffith mixture is one of the best medicines which has ever been used. The quinine will often exert a benign influence upon the whole system, and should always be given where there is the slightest prospect of success.

To moderate the diurnal fever, the safest and best means are the sweet spirits of nitre, Hoffman's anodyne liquor, and the acetate of ammonia. Hoffman's anodyne will often supply the place of opium. The hemlock, or cicuta, in the dose of a grain and a half of the extract, will often agree where opium fails. The cicuta, used in the early stage of the disease, has been supposed by many to produce a healthy suppuration of the ulcerated lungs, and to incline tubercles to heal. We think the cicuta has some effect in promoting the absorption of tubercles, and it may give a healthier tone to those which have already suppurated.

The bloodroot, which is nearly allied in its properties to the foxglove or digitalis, well deserves a trial, in the treatment of phthisis pulmonalis. Eight grains of the powdered root will operate as a gentle emetic. In small doses, it moderates and softens the pulse, relaxes the skin, and promotes the expectoration. The foxglove is in more common use than the bloodroot, and, perhaps, justly so; both should, however, be administered where there is a prospect of relief. The wood naphtha has lately been much commended for its medicinal powers, in the cure of consumption, and deserves the notice of the profession. If it does not cure, it may alleviate the disease and prolong life. The most that medicine can do, in any disease, is to prolong life; it cannot ultimately save it. The following recipe is one of the best we have ever used for the relief of the consumptive cough. Syrup of squill, tincture of lobelia, wine of ipecac., and pectoric, equal parts; to be taken in the dose of a tea-spoonful, three or four times a day. Another recipe, which will be found of great service in abating the cough, is composed of one drachm of muriate of ammonia, ten grains of ipecac., and three drachms of the extract of liquorice, dissolved in half a pint of boiling water. A table-spoonful, may be taken three or four times a day.

The iodide of potash, in doses of three to five grains, dissolved in a little water, has of late been highly recommended, and, also, the inhalation of the vapor of iodine. They both deserve a trial.

CONTAGION. — The matter of any disease which excites the same disease in another person, whether applied by contact, by the breath, or in any other way.

CONVULSIONS OF CHILDREN. — The convulsion fits of children, and of youth under the age of puberty, seem to differ somewhat both from the hysterics and from the epilepsy of grown people. The alternate fits of laughter and crying, and the sensation of suffocation by the rising of a ball in the throat, which are peculiar to hysteric fits, are not experienced by children in convulsions. Nor do they often have that foaming at the mouth and snoring sound in breathing which are common in epilepsy. Convulsions are not very liable to affect children after the age of four or five years, though they may happen at any age under puberty. From birth to two years of age is the period in which they are most liable to have them.

A child, without any warning whatever, will often be seized with convulsions; that is, it will fall back as in fainting, turn deadly pale, and its lips will become purple; it will commonly straighten itself out and become stiff all over; its eyes will turn up in its head, its hands will be clenched, and its muscles will begin to twitch. The eyelids and muscles of the face will either become stiff or keep in constant motion. The teeth will be set, and the body start all over with a sudden jerk, as if it had received an electrical shock. But these symptoms are more frightful than dangerous. In the majority of cases the child comes out of the fit in a few minutes, or at least begins to show signs of consciousness, and in half an hour or an hour, after some little drowsiness, it will entirely revive. As soon as the fit is over, the child most commonly falls asleep, and restores the lost powers in this way. Its sleep should never be disturbed. In the convulsions the breathing partakes of the same kind of spasms with the muscles. In some instances there will not be much convulsion; the child will only turn pale, become unconscious and stiff, with its teeth set, and its eyes partly closed and turned up. In other cases, especially where the fit proceeds from previous disease, as it often does, the child will remain in the fit for some hours; its face will become purple, and then, if it comes out of it, another fit will soon follow, until death relieves the sufferer. Many children die in convulsions occasioned by diseases of the brain, stomach, bowels, and lungs.

The most common causes of convulsions are teething, phlegm in the stomach which has been swallowed in influenzas and lung affections, indigestible substances taken into the stomach, such as orange-peel, the rind of different kinds of fruit, cheese, and many other things which children are greedy to eat, but which they should not have until after they get their teeth. Any kind of pain and distress will produce convulsions in children.

There are some symptoms which almost always precede convul-

sions in children, and which, if obviated in time, will prevent the fit. If the stomach and bowels of the child become very hot, the breathing short and quick, and the pulse frequent, especially after it has had one fit, we have good reason to anticipate another; and if a gentle emetic of ipecac. is given, and after it a little castor-oil, the convulsion may be counteracted. An injection of salt and water will often answer instead of both emetic and cathartic. The heat and distress, in these cases, appear to arise from indigestion, and as soon as the digestive organs are unloaded, all difficulty is obviated. The mother's milk will sometimes disagree with the infant, and occasion convulsions; in such cases the remedy is very plain.

Domestic Remedies. — After loosening the child's clothes, cold water should be dashed upon its face, stomach, and bowels, and continued for some minutes. If this does not revive it, and it is unable to swallow, an injection of salt and water, or of any other cathartic medicine, should be administered. Indeed, in the majority of cases, an injection is almost the only thing which can be given. If the affusion of cold water and the injection do not make any impression upon the fit, the child should be immersed in a warm bath, and afterwards rubbed with the spirits of camphor or new rum. Cloths wetted with hot water, or spirits, should be constantly applied to the stomach, and mustard poultices to the feet. As soon as the child can swallow, an emetic of ipecac., alum, or lobelia, should be given it, and this should be followed by a dose of oil, salts, magnesia, or some other suitable physic. The child all the while should be rubbed with the hand, or a soft flannel cloth. If all these means fail, a few drops of laudanum and ether should be given. Five drops of laudanum and ten of ether can be given to a child of a year old, and less or more, as the child happens to be younger or older. Where the convulsions are severe, and the teeth set, eight or ten drops of laudanum can be introduced by an injection made of starch. A little peppermint, spirits of camphor, or tincture of assafœtida, where the patient is able to swallow, has a tendency to allay the convulsions. The child should be allowed to breathe the cool, fresh air, and should not be over-dosed with medicine.

Professional Remedies. — The leech we believe to be one of the greatest blessings to man, but especially to children, who cannot bear the loss of blood so well as grown people. Two or three leeches placed upon a child's head or stomach is often attended with the most decided relief. In convulsions, if the child is taken in full strength, leeches, if they can be obtained, should always be applied; but if previous sickness has reduced its strength, they will not be needed. Where leeches cannot be procured, a moderate bleeding from a vein will be proper. Much caution should be used, however, in drawing blood from children, as mere emptiness of itself will sometimes produce convulsions in them. Where the convulsions are occasioned by some local disease, or irritation, which has long existed, the bowels should be simply moved, and the

strength supported by cordials. Wine, brandy, or rum may be used, indifferently. The tincture of castor, in doses of fifteen or twenty drops to a child of one or two years of age, is one of the best medicines in use. Blisters are rarely found to be of much service in this disorder. Cold and hot bathing, the evacuation of the stomach and bowels, the giving of anodynes and carminatives, are about all that can be usefully done for children in convulsions. There is almost as much harm in doing too much as there is in not doing enough. When the fits become frequent, the system should be strengthened with the mineral acids, quinine, and the tincture of the muriate of iron. Griffith's mixture is an excellent medicine for children who have been weakened by convulsions. It may be taken in tea-spoonful doses, twice every day.

CORPULENCY — *Polysarcia*. — Fatness often becomes a disease. The adipose substance under the skin, in certain instances, becomes as thick as that of a hog. The mesentery or substance to which the bowels are attached, and the omentum, or apron, as it is called in the lower animals, become so loaded with fat as to swell the abdomen and press upon the diaphragm. This pressure narrows the cavity of the chest, and produces a difficulty of breathing. The heart and the large blood-vessels also become compressed, and consequently the pulse becomes weak and slow. The motion of the bowels is impeded, and muscular motion is performed with difficulty. Fatness produces insensibility and a disposition to sleep, and where it becomes excessive, apoplexy and death. Neither the heart nor the lungs having room to expand, the circulation of the blood languishes and the motions of the vital organs are oppressed. We once witnessed a case where the cavity of the chest became so filled up as to induce an inflammation and a partial hepatization of the lungs, which ended in death.

Fatness is commonly induced by high living and a free use of fermented liquors. The laborer and the active in any pursuit of life rarely become fat. People in easy circumstances, who can enjoy all the comforts of life without sharing in any of its cares and toils, are extremely liable to become corpulent. Care and exercise are sure to make people lean, while quietude and indolence are as sure to make them fat. The means of cure are, therefore, in every one's power. There is a wide difference between a fleshy person and a fat person. Too much flesh or muscle can injure no one, but too much fat, which is an increase of the cellular substance, necessarily produces disease. To reduce the fatness, people only have to reduce the quantity and the richness of their food, and to take such a degree of exercise, or to adopt such a system of labor, as thinner people pursue. Where a person is enabled to indulge in rich food, to lead an easy life, without trouble or care, and to sleep overmuch, he very soon begins to grow corpulent. He must, therefore, if he wishes to become thinner, eat less, sleep less, and exercise more; in a word, he must become temperate and active. Some people are naturally inclined to corpulence,

but austere living and hard labor will effectually baffle this tendency.

The use of acids, such as vinegar and lemon-juice, by young people, probably only increases the appetite, where it does not effectually destroy it and make the matter worse. A too free use of acids disorders the digestive powers, and a moderate quantity only sharpens the appetite. A grain or two of ipecac., or some other nauseating medicine, just before dinner or supper, will have a much better effect. But the best and safest method of cure is to adopt a vegetable diet, to take active exercise every day, rise early in the morning, and to keep awake as late at night as the most industrious people are accustomed to do.

CORROSIVE SUBLIMATE — Muriate of Quicksilver — *Murias Hydrargyri*. — This salt is composed of the marine or muriatic acid and quicksilver. It consists of transparent crystals, which are soluble in hot water and in alcohol. It has a metallic, styptic taste, and is considerably corrosive, as its name imports. Earths and alkalies decompose it, and neutralize its effects upon the stomach. It is a poison.

It cannot be safely taken into the stomach in more than an eighth of a grain for a dose, and it should not be given more than three times a day. It is chiefly used internally in the cure of the venereal disease. It may, however, be used for other diseases, especially the scrofula and glandular diseases. It produces salivation, like calomel. In powder, it may be applied to venereal ulcers, cancers, and fungous sores. Dissolved in alcohol, or hot water, in the proportion of half a grain of the salt to an ounce of the solvent, it makes a healing wash for sores, pimples, and eruptions upon the skin. It is an effectual remedy for the itch.

CORYZA — The Snuffles — Slight Cold. — It is an inflammation of the lining membrane of the nose. It is cured by exciting a gentle sweat, or a dose of salts.

COSMETIC. — Medicines used to cure pimples, blotches, and freckles upon the skin. The most celebrated is Cologne water.

COSTIVENESS. — This complaint is one of the most common to which mankind are liable. A slowness of the bowels does not alone constitute the disease. There is a great difference in individuals with respect to the frequency of the motion of the bowels in perfect health. Some people are subject to a daily movement of the bowels; others oftener than this; and some again will go two or three days without the performance of this office, while each will enjoy entirely good health. Sedentary, nervous, and hypochondriacal people are almost always subject to a costive state of the bowels; on the contrary, people who labor or exercise much, and are free from nervous complaints, almost as uniformly enjoy a quick and healthy state of the digestive organs. The lower portion of the intestines, or the large intestines, as they are called, the colon and the rectum, are the chief seat of this complaint, although the whole length of the alimentary canal probably partakes of the same

affection. The action of the stomach is no doubt slower in costive habits than in an open state of the bowels.

When the motion of the bowels becomes slower than it habitually is, and, at the same time, the contents of the bowels become hard and dry, and the evacuation of them is performed with difficulty and without much desire, there is a disease of some portion of the intestines, and this is the disease implied by the term costiveness.

Sometimes the diameter of the intestines will not be lessened, and, at others, it will become much smaller than usual. The alvine discharges will often present nothing but small, dry, hard, round balls, and the diameter of the rectum will be diminished to the size of a goose-quill. There will be but very little desire, at any time, to go to stool, and a constant weight and heaviness will be felt about the lower part of the belly. There will be a constant sense of confinement over the whole system, and the head, in particular, will never feel right. In this state, no bodily or mental labor can be performed with comfort and ease. After eating, the sense of fulness remains for a long time, and hardly subsides before another meal comes round.

Domestic Remedies. — The best and surest remedy for this complaint is found in exercise and in the aliment. Exercise gives a quick motion to the blood, and a quick motion of the blood gives a quick motion to the bowels. Coarse vegetable food quickens the motion of the bowels both by its properties and its quantity. The living of a New England farmer is in general well adapted to produce an active, healthy condition of the bowels. Rye and Indian bread, potatoes, cabbages, turnips, carrots, pumpkins, squashes, salted pork and beef, fresh butter, cheese, milk, buckwheat, beans, apples, peaches or pears, are all articles as well suited to health as they are adapted to the climate. To these may be added a list of still more opening articles, such as currants, whortleberries, raspberries, strawberries, cherries, grapes, walnuts, chestnuts, and butternuts.

Fine flour bread, on the contrary, especially hot biscuit, crackers, gingerbread, doughnuts, and all the variety of rich cakes which are consumed in the large towns and cities, are exceedingly productive of costiveness. Fresh meat, rich gravies and sauces, where a large proportion of the aliment is composed of them, seldom fail, in the end, of inducing this complaint.

Too small a quantity of food, or unwholesome food, will produce costiveness. The best medicines for costiveness are, the lenitive electuary, butternut pills, thoroughwort pills, aloetic pills, the elixir pro, the elixir salutis, rhubarb pills, and, in general, all the mild kinds of physic, taken in just sufficient quantity to move without weakening the bowels; lastly, aperient injections.

COUGH. — The catarrh and influenza are attended with the secretion and raising of phlegm; and the consumption with pain and soreness of the lungs, and signs of a general disorder, together with a cough; but there is often a kind of dry cough, which will

last for weeks and months, without any other trouble than the cough itself. In some instances, there will be a little raising of phlegm in this kind of cough, but for the most part it is dry. Mix an ounce of laudanum and an ounce of the wine of antimony, and take thirty drops, twice a day.

COUP DE SOLEIL — Stroke of the Sun. — This affection is not distinguishable from apoplexy. There is probably an effusion of blood or water upon the brain, as in apoplexy, and the same remedies are applicable. See *Apoplexy*.

COWITCH. — This plant grows in the West Indies. The pods are about the length of the pea pod and nearly of the same size. The outside of the pods is covered with sharp, prickly hairs, which, rubbed upon the skin, produce an intolerable itching. The substance upon the pod is something like the prickly head of the burdock, or like the chestnut bur. Mixed with molasses or syrup, it is given to children for worms. The syrup or molasses is made quite thick with the cowitch, and given in the dose of a tea-spoonful or table-spoonful, in the morning, fasting. It acts mechanically, or by pricking the bodies of the worms.

A tea, made of the roots of the cowitch, is said to be an effectual remedy in the dropsy.

COW POX — Vaccine Disease. — The cow is sometimes affected with a pustular eruption upon her teats, which strongly resembles the pustules of the small pox. This eruption, or collection of pustules, is called cow pox. It had been noticed, for a long time, by farmers, that pustules upon the teats of cows would produce similar pustules upon the hands of those who milked them; and also that those who had experienced this eruption upon their hands would never take the small pox. This, however, was a mere tradition among country people and farmers, and whether there was anything in the belief, or not, its protective power could only extend to those milkers who might chance to meet with the distemper in cows. About fifty years ago, Dr. Jenner, an English physician, got hold of this tradition, and having met with a milker who happened to have the pocks upon his hands, he conceived the idea, — and it was one of the happiest which ever entered into the mind of man, — of inoculating another person from the matter of these pustules, and so of extending it, if it continued to produce the affection, to the community at large. Accordingly, on the 14th of May, 1796, he inserted the matter, taken with a lancet from the hand of a milker, into the arm of a child, of eight years of age. The experiment succeeded. In 1798 he published a history of his experiments, which effectually introduced the practice of vaccination to the notice of the public. Vaccination was introduced into this country in the year 1799.

The resemblance of the pustule of the cow pox to that of the small pox is so great, that, among dairy people, it was no doubt always considered a species of the small pox, since it was easily transferred from the teats of cows to the hands of those who milked them, and naturally led them to infer that it might be an antidote

to the small pox. Observation, although necessarily very limited, confirmed the conjecture. It is supposed that the original matter comes from the heels of the horse, and is transferred thence to the teats of the cow by those who handle the horse's feet. The disease in the horse, called the grease, has been supposed to be the original foundation of the vaccine matter; but of late this idea has been rejected.

The disease produced by the matter of the cow pox is incomparably milder than the disease produced by the matter of the small pox, even when the latter disease is produced by inoculation. The vaccine disease is not contagious or communicable by the atmosphere, like the small pox, and never defaces the skin. Were personal beauty only concerned, the discovery of the efficacy of the cow pox, in protecting mankind from the physical ravages of the small pox, would entitle it to our eternal gratitude. The reputation of the vaccine disease, in protecting people against the small pox, has scarcely suffered any loss since its first promulgation. It is true that the varioloid, a species of the small pox, which has been varied in its appearances, by the person's having had either the vaccine disease or the true small pox, has been more prevalent in the last ten or twelve years than it was in the time of Jenner and the first propagation of vaccination. But this increase is probably owing to carelessness in vaccination, to inattention in the selection of the right kind of matter, both as respects the age and the kind of it, and to its deterioration, by having been so long transmitted from one person to another, without going back to the cow, the original source, for a fresh supply. When we look about us, in all our towns and cities, and observe how rare it is to meet a person pitted with the small pox, and when we reflect that people now-a-days have no other protection against the contagion of the small pox than vaccination, and that everybody we meet would be more or less pitted without this protection, we can hardly need more evidence that the vaccine disease is the most valuable discovery which has ever been made by man.

The cow pox pustule is a small, red, circular spot, about the size of a mallows' cheese; instead of being pointed upon the top, like most eruptive pimples and blotches, it is flat, or, rather, it is depressed in the centre. About the sixth day, if it is pricked, it will give out a little watery matter, and this matter, if put into another person's arm, will, in about three or four days, excite another pock, just like the one from which the matter was taken. There is a spurious kind of cow pox, against which we must be on our guard. The pustules are more or less pointed, and are not so completely circular. The spurious cow pox is white. The vaccine matter, to ensure protection, must either be taken between the sixth and the eighth day from the time it was inserted in the arm, or we must wait until a dry scab has been formed.

After you insert a little of the cow pox matter under the skin, the first appearance of its having taken effect will generally occur on the third day. A small red spot, rather hard, will arise from the

place where the puncture was made. There will sometimes be a slight headache, and other symptoms of a trifling fever, but nothing which calls for the use of medicines. The pock, in some instances, will not appear until the fourth, fifth, or sixth day after the vaccination. In young children the infection is harder to take, and in them, especially while teething, it will often be seven or eight days before the pustule appears. About the ninth day, the pock, in general, begins to grow hard, and to form a scab, which gradually grows darker, until it becomes of a mahogany color. The mahogany color of the scab is a very good sign of the genuineness of the pustule. The scab will commonly come off about the end of the third week. In most cases there will be a considerable redness, soreness, and some swelling, around the pustule, about the eighth or ninth day, and continue until the eleventh. The glands under the arm will also become somewhat swelled and sore. In some cases there will be no surrounding inflammation, or areola, as it is called, and the efficacy of the infection be nevertheless equally reliable. If the pustule is circular, flat, and a little hollowing in the centre; yields a limpid fluid on the sixth or seventh day; forms a mahogany-colored scab; and leaves a scar sunk in the skin, which presents little indentations like the top of a thimble, we may be sure that the subject has had the cow pox thoroughly.

The most common, and perhaps the best, method of vaccinating, is to take the matter upon a piece of a quill, sharpened to a point, dipped into a cow pox pit which is ripe, and, after raising the skin with a needle or a lancet, to push the point of the quill containing the matter gently into the puncture which has been made by the needle or lancet, keeping the quill in the puncture until the blood, if there has been any raised, has become dry. It takes some little time for the matter to be absorbed; probably twenty minutes or half an hour.

Another method is to put a little piece of the scab into a puncture made in the same way. The scarf skin should be a little raised, without drawing blood, if possible, and a small particle of the scab gently pushed under it, and there allowed to remain. But where you vaccinate from a scab, it is a better way to soften a piece of the scab with a drop of warm water, and reduce it to a paste; then to touch the point of a quill with this paste, and insert the matter in the arm, as you have been directed to do in its liquid state.

The matter, in the shape of a scab, by inclosing it in a piece of beeswax, can be kept good for several months. Heat decomposes it. It must, therefore, be kept in a cool place.

The cow pox matter which has been in use until very lately has been passing through the human subject ever since the time of Dr. Jenner, a period of nearly fifty years. In the year 1837, the small pox hospital of London obtained some of the matter directly from the cow, and commenced vaccination from the original stock, which discovers a much greater degree of activity than the matter which has been so long in use. The local inflammation is more severe,

and the constitutional symptoms more perceptible. Every person, much acquainted with the practice of vaccinating, must have observed how very hard it often is to make the vaccine matter take, and how apt it is to fail in young children. The new matter, which is now introduced, will probably remedy this defect. Dr. Dunglison, of Philadelphia, has introduced the fresh virus into this country, which will soon everywhere take the place of the old matter.

In all cases where there is any doubt about the taking of the disease, vaccination should be repeated. It is a good plan to vaccinate as often as once in four or five years. The disease is trifling, and vaccination is easily performed; and where the means of safety are so much within our power, it would seem the dictate of common sense to improve them. Certain individuals will not take the cow pox; but such individuals should never neglect a good opportunity of vaccinating; they may take the disease at one time, when they could not take it at another. If, after repeated trials, the virus cannot be made to take, perhaps it would be advisable for such people to be inoculated with the matter of the small pox. The small pox, by inoculation, is a much severer disease than the cow pox, but personal safety would probably dictate the experiment, rather than to run the risk of taking the small pox in the natural way. A child or any other person should never be vaccinated when there is any kind of humor about them, for the vaccine virus is almost sure to aggravate every species of eruption upon the skin. The existence of a humor is also liable to neutralize the effect of the vaccine virus. Neither is it advisable to vaccinate during the time of teething, or of any other general disease. It is now the practice, in all the large cities and towns, to vaccinate children within six or eight weeks after they are born; and the practice has not only been dictated by expediency, but is a very salutary one. In public vaccinations, where large numbers of children undergo vaccination at the same time, many errors must necessarily occur. Some cases of the spurious disease will be mistaken for the genuine, and others will go away with the idea that they have had the disease, when they have only had a little red swelling at the point where the matter was inserted. Too much care and attention cannot be well bestowed upon an operation, which, though slight in its nature, is so nearly and vitally interwoven with our welfare. It must not be forgotten that the most proper time to take the matter from a vaccine pustule is between the sixth and eighth day, and the earlier you take it, after the sixth day, the more efficacious it will be. The matter should always be taken from a person who is free from all kinds of humors, and who has never been vaccinated before; otherwise, there will be danger of having an abortive disease. If some degree of inflammation should be at any time excited, the arm or part which has been vaccinated should be poulticed or fomented with warm water, and washed with cooling lotions, like any other inflamed

part. The most proper place to vaccinate is on the outside of the arm, about half way between the elbow and the shoulder.

CRAMP.—We do not here mean to speak of spasms in general, of which there are several kinds, as tetanus or the locked jaw, hysterics, &c., but of that painful affection of the muscles, particularly the muscles of the legs, with which people are often troubled, and which always goes by the name of cramp. Many people are great sufferers by this disease. It is not dangerous, but often more painful than some diseases which are. It attacks young people while growing up, and those who perform heavy work upon their feet. It will seize people in climbing a tree or a mast, and sometimes force them to loose their hold. For the most part, it proceeds from overstraining the muscles; and where this is the case, nothing but a moderation of the labor or exercise which produces it can effect a cure. When fits of the cramp become severe, the subject should take thirty drops of laudanum, and rub a tea-spoonful or two of it upon the muscles which are affected. A tea-spoonful of the spirits of camphor, taken in a little water, will also serve to quiet the cramp. The same may be rubbed on the seat of the affection. Fomentation with a warm decoction of poppy-leaves may be used when the laudanum and camphor are not at hand. But in most cases, simply rubbing the muscles with the hand, or a piece of dry warm flannel, will carry off the disease. Where it comes on after getting warm in bed, it will be carried off by getting out into the cold; and where it is produced by standing or working too long in the cold, it will be relieved by getting thoroughly warmed. Pregnant women are peculiarly liable to the cramp, from a pressure of the gravid uterus upon the nerves of the legs. In them the affection can only be palliated until after delivery, when it entirely leaves them.

CRANBERRY, WILD—*Arbutus Uva ursi*.—This vine is sometimes called bearberry. It grows in all parts of New England, upon high land, and is an evergreen. The leaves have an astringent taste, bordering upon bitter. A tea made of the leaves is much used in affections of the urinary passages, particularly in the diabetes, or excessive flow of the urine, and gravel. The leaves are of a pale-green color, smooth on the under side, small, and oval. A dose of the powdered leaves is a tea-spoonful.

CRANE'S BILL—*Geranium Maculatum*.—This plant is a very active astringent, well calculated to restore to health those serous and mucous membranes which have lost their elasticity and cohesiveness, or tone. It is found everywhere in the United States, in a moist soil. The stem is about two feet high, and the leaves are large, hairy, and notched, or toothed, and become spotted as they grow old, which has given it the name of the spotted geranium.

The root is the part most used in medicine. From twenty to thirty grains of the powdered root is the common dose. In the cholera infantum, boiled in milk, it is often given to restrain the

discharges. In the last stages of dysentery and diarrhœa, its astringency will often be found sufficient to control the complaint.

CRANIUM—The Skull.—It comprises eight bones,—the frontal, two parietal, the occipital, two temporal, the ethmoid, and the sphenoid. It encloses the brain, and is covered by the pericranium, or scalp.

CRASSAMENTUM.—The coagulum of the blood, or the clot which forms in the spontaneous decomposition of the blood.

CREAM OF TARTAR.—The crystals of tartar, of which the cream of tartar is made by purifying and grinding, are obtained from the sediment of wines. In the crude crystals, it has a sub-acid taste, and is partially soluble in water. The cream of tartar is a mild, cooling, laxative, diuretic salt. Half an ounce or an ounce of it, mixed with molasses or water, will operate as a purgative.

In the dropsy it is esteemed one of the most certain and safe remedies. In the form of drink it operates as a diuretic. In ounce doses, taken daily, in molasses, it drains off the water by the bowels, and proves more successful than in the form of drink. A tea-spoonful infused in a tumbler of water, or flax-seed tea, and sweetened with loaf sugar, makes a useful and cooling drink in ardent fevers and colds. Combined with jalap, it is still more effectual in draining off the water in dropsical swellings.

It is often given internally, to cure the cutaneous eruptions of children.

CREOSOTE.—This is a colorless oil, obtained by distillation from tar, or the pyroligneous acid. It is a powerful astringent, and styptic, and, applied to the raw flesh, is caustic. It is considered an escharotic. Applied to small bleeding vessels, it will stop hemorrhages. A drop of it upon a dossil of lint is often used to cure the toothache. Taken upon the tongue, it has a hot, burning, styptic taste. It has the smell and flavor of smoke, of which it constitutes the essence. In smoked meats and fish, creosote is the oil which penetrates and preserves them. It is a greater preserver of animal substances than salt.

Internally, it is administered in a number of diseases. The ordinary dose is from one to four drops, diluted with water or mixed with mucilage. We have seen it successful in stopping a bleeding from the lungs; and its influence is very considerable in arresting bleedings from other organs, especially the sanguineous discharge in the monthly sickness of females. It has acquired some reputation in the cure of hysterics and other nervous affections. In the canker, some prefer it to any other gargle.

CROTON OIL.—This oil is imported from the East Indies. It is derived from the seeds of a tree, called the croton tiglium. The seeds are of a dark-gray color, and, in shape, resemble the seeds of the castor-oil plant. The oil is the most powerful purgative in use. One drop will operate upon the bowels forcibly. The time it takes up in the operation is not commonly more than forty minutes. It has a hot, burning taste, more penetrating than

the juice of red pepper. It may either be made into a pill with a crumb of bread, or mixed with syrup or mucilage. The tenth part of a drop taken upon the tongue will often move the bowels.

This oil is mostly used in the colic, strangulated hernia or rupture, and in obstinate obstructions of the bowels. The article is an invaluable addition to medicine. It is often used as an external irritant, and is found very serviceable instead of blisters.

CROUP—*Cynanche Trachealis*.—The croup is an inflammation of the windpipe, and is mostly confined to children under twelve years of age. It is very rare that the croup affects grown people. Nursing children are mostly exempt from this disease. It, for the most part, attacks children within the period included between two and eight years of age. An inflammation of the uppermost part of the windpipe, which is called the larynx, has been considered a distinct disease from the croup, and denominated the *cynanche laryngea*; but the distinction is altogether too faint and unimportant to be treated as a separate disease. The practice, in an inflammation of the windpipe, be it in what part of the pipe it may, is the same in the same degree of inflammation.

The croup may be known by the peculiar sound which the child makes in breathing and coughing. This sound resembles that which is made by the breathing of a horse in the hives, and when the child coughs, the sound resembles the barking of a dog, and some have likened it to the crowing of a cock. The sound made in breathing is so peculiarly hoarse and croaking, as scarcely to be forgotten after a person has once heard it. The mere sound indicates that the pipe through which the air passes must be quite choked up. In coughing, there is little or no soreness felt, as in an inflammatory sore throat. It differs from a hoarse cold, inasmuch as the breathing is performed with great difficulty, whereas, in a hoarse cold, the breathing is not essentially impeded. Besides the barking kind of noise made in coughing and speaking in croup, the inflammation is accompanied with a quick, hard pulse, dryness of the mouth and tongue, thirst, heat, and all the symptoms which usually attend local inflammations. The breathing resembles the asthma of grown people, but the mere asthma has not the peculiar sound, in coughing, which belongs to the croup.

In the beginning of croup, the child will appear to have only a hoarse cold, but, if attention is paid to the coughing, which is not very frequent, it will be perceived to have an unusually shrill sound. The little patient will be inactive and fretful, and at night the shrill kind of coughing will be more apparent than in the day-time. It will sometimes appear to be "stuffed up," as it is called, for two or three nights, before the difficult, wheezing kind of breathing becomes fixed. In young children it will occasionally come on of a sudden; the breathing will hasten from bad to worse, the windpipe will become entirely closed up, and the child will die in an hour or two from the commencement of the

attack. We once witnessed the death of a child, a little under a year old, which happened in one hour from the first notice which its parents had of the disease. Usually, however, it is about two days before the real symptoms of croup become fully developed, after the commencement of the indisposition. As the disease progresses, the fits of coughing become more distressing, the child makes a great effort to inspire a full breath of air, the face becomes flushed, and the eyes protrude. The tonsils and palate will sometimes, though not always, become red and swelled; there will be some redness all around the entrance of the throat, and sometimes the false membrane which forms in the windpipe may be seen. The head is usually thrown back to escape suffocation, and the child will often rise up suddenly to catch his breath, and, in agony, dash its face upon the pillow. It is not often that much of anything is coughed up, but when there is, the matter will consist of fibres, or pieces of thin membrane, like isinglass. This matter has been considered by some hardened and dried mucus, and, by others, an organized substance thrown off by the process of inflammation. There will sometimes be pretty long remissions in the difficulty of breathing, so as to give hopes of recovery; but the distress for breath will suddenly return and carry off the patient.

The croup will sometimes terminate fatally in twenty-four hours, but children generally live until the fourth or fifth day. Even where considerable quantities of the membranous film are coughed up, it only alleviates for a while the distress in breathing, without affording any permanent ground for recovery. The inflammation in croup often extends to the bronchia and the lungs, and involves the whole breathing apparatus in a similar condition with the trachea. The matter found in the lungs after death resembles that in the windpipe.

Domestic Remedies.—The best remedy which the family can give to a child attacked with the croup is an emetic. A wine-glassful of lamp-oil or goose-oil will often answer this purpose where no better medicine can be obtained. A tea-cupful of the thoroughwort tea often proves a good vomit, but it is not always sure.

The best emetic which can be given to a child in the croup is, in our opinion, the powdered alum. A heaping tea-spoonful of the powdered alum, mixed with molasses or honey, should be given every ten minutes, until it pukes thoroughly. The alum, more than any other substance, operates upon the salivary glands and makes them pour out the saliva in great profusion. It instantly promotes the secretion of the throat and fills the mouth with a watery mucus. It was this property in the alum which first pointed it out to us as an appropriate remedy in the croup, and we have used it for seventeen years with the fullest confidence in its superiority as an emetic in this disease. It will sometimes operate upon the bowels, but it is much less likely to prove cathartic than antimony or ipecac. In one case, it acted like a charm where the child was given up for lost. An older

child had just died of the croup, in the same family, and this was attacked in the same way, and betrayed the same symptoms, but, two or three emetics of the alum subdued the disease and saved the child's life. The lobelia, in tea-spoonful doses of the infusion, is said to be a very effectual emetic. Ipccac. is always a safe remedy, but, in this disease, it is not quite powerful enough. The hive syrup of Dr. Cox, of Philadelphia, has been used with a good deal of success; but for young children it is not so safe as the alum.

A plaster of snuff and hog's lard, laid upon the chest, is one of the best means in use for relaxing the system and subduing the inflammatory action. A tea-spoonful of common yellow snuff, mixed with a little lard and spread upon a rag, composes the plaster. It will sometimes make the child very sick at the stomach, and vomit smartly; but where this effect continues long, it will be advisable to remove it until the sickness subsides. The drink should be flax-seed tea, or some other mucilaginous drink, and gruel. If the emetic does not operate as physic, a dose of castor-oil or salts should be given. But this disease, in general, runs its course with such rapidity, that no time should be lost in obtaining all the medical aid which is necessary.

Professional Remedies.—In the early stage of the disease, a sufficient quantity of blood should be drawn to make an impression upon the pulse. If the disease is not subdued by the quantity drawn from the arm, it will be the safest, and, probably, the most effectual way, to draw more, by the use of leeches, placed upon the neck. Some are in the practice of using leeches only, and where they can be obtained in sufficient number, they may be found as effectual as drawing blood from the arm. Blisters are doubtful remedies, especially when placed around the neck. If the inflammation were upon the surface of the body, we should poultice it. It has always appeared to us, therefore, that warm, simple emollient poultices were the most solvent and effectual local applications which could be made, and we have used them for many years with increasing confidence in their propriety. Dr. John D. Fisher, of Boston, has recommended the use of warm fermentations to the throat. These answer a purpose similar to a poultice, and may be used with equal propriety. But where these applications are not attended with satisfactory relief, the volatile liniment, which is composed of sweet oil, and the water of ammonia, in the proportion of one drachm of the ammonia to one ounce of the oil, should be substituted. The liniment should be spread upon a pretty wide piece of flannel, and the flannel wrapt around the neck. This application, when used freely, will often, of itself, raise a profuse sweat over the whole surface of the body. It increases the perspiration about the neck very much, and, in this way, relieves the windpipe.

Equal parts of squills and of castor-oil, given in a dose of a tea-spoonful every hour, until it operates upon the bowels, is one of the best combinations which has ever been administered. It

serves to quicken the secretion of the windpipe, at the same time that it produces a general relaxation of the system by evacuating the bowels. A tea made of the seneca root, boiled in water, is a good solvent of the tough, filmy matter which clogs up the trachea. Small doses of ipecac., or of antimony, answer a similar purpose. Great care should, however, be taken, not to administer medicine too fast. While the child is being vomited nothing else should be given, unless it be a little drink; and it is always best to raise a sweat before evacuating the bowels, as the two operations cannot be well carried on at the same time. The evacuation of the bowels lessens the perspiration. After the patient is bled, he should first be vomited, then sweated, and afterwards, purged. After making a thorough trial of medicine and anti-inflammatory means, it will often be advisable to rest a while, and give the patient a short respite, and ourselves a chance to see what particular effects arise from the medicines, and what from the disease.

Calomel, in a dose of a grain or two, every hour, has been highly extolled, and is probably sometimes a solvent of the inflammatory action. Calomel has, no doubt, a tendency to increase all the secretions, and is a good remedy in good hands. An adroit practitioner will produce effects with this and every other medicine, which never can be imitated by the unskilful. The sharper and the more delicate the instrument, the more dexterity it requires to wield it.

Some physicians are under the persuasion that the croup is never cured; but this persuasion is without foundation. There are two degrees in this disease, as there are in the inflammatory sore throat. The croup is sometimes mild, and, at others, severe, like almost all inflammatory diseases. The mild cases recover, and the severe ones often end fatally. It is probable that one half of the cases of croup are of the mild kind, and, consequently, recover.

In cases where all other means have been used without success, tracheotomy, or opening the windpipe, has of late years been tried. In this country and in England the operation has been rarely performed, but in France it is more common. In one hundred and forty cases where it was performed in France, twenty-eight of the cases are reported to have been successful. "In one case, performed by Dr. Rhea Barton, of Philadelphia, at the earnest solicitation of the physician and friends, when the child was apparently in the article of death, the first access of air to the lungs produced effects as wonderful as those of galvanism. The child looked round, embraced his parents, and, I believe, talked. It soon, however, sank again, and disappointed the hopes which had been raised."

CUBEBS—Cubeba.—An East India spice, resembling black pepper, but inferior in aromatic pungency and warmth. In the gonorrhœa, in the dose of a drachm of the powdered corns, it will

often effect a cure. It may be given in any disease where a warming spice is required.

CUTANEOUS DISEASES.—The description and treatment of cutaneous diseases will be found under the heads of, *Blotched Face, Chicken Pox, Cow Pox, Elephantiasis, Heat Eruption, Itch, Leprosy, Measles, Purpura, Red Gum, St. Anthony's Fire, Salt Rheum, Scald Head, Scarlet Fever, Small Pox, Tetters, Yaws, and Yellow Gum.*

CUTICLE—The Scarf-skin.—It is this skin which is raised up in a drawn blister. It is thin and transparent. A mucous membrane, called the rete mucosum, lies between this and the true skin. It is the rete mucosum which gives the color to the skin.

CUTIS.—The true skin, or, rather, the undermost membrane which composes the skin.

CYANURETS.—These are combinations of cyanogen, or prussic gas, with different metals, as gold, iron, mercury, potassium, &c. They are used in medicine for the cure of those diseases in which the blood is more or less deteriorated, and in those nervous affections which arise from a loss of tone either in a particular organ or in the system generally. The preparations chiefly in use are,

CYANURET OF GOLD—In chronic syphilitic affections and scrofula, in the dose of one fifth of a grain, internally, in form of a pill; or in a powder, with orris-root, applied by frictions to the tongue.

CYANURET OF IRON—Has been employed in epilepsy, scrofula, intermittent fever, and immoderate flow of the menses, accompanied with great nervous excitability, with much success. The dose is from two to five grains daily, in powder, with sugar, or in pill, with rhubarb.

CYANURET OF MERCURY—Is principally used in syphilis. It is liable to produce vomiting and salivation, if incautiously used. It should be administered in combination with some form of opium. Dose—commence with one eighth of a grain, and increase to half a grain or more, as the constitution will permit.

CYANURET OF POTASSIUM—Is highly recommended in nervous headaches, which resist almost all modes of treatment. It is also used in some cases of tic douloureux, by application externally, in form of a solution, or an ointment, in the proportion of three or four grains to an ounce of water or lard. In rheumatism it is of service as a local application. In inflammations of the lungs it is sometimes used as an expectorant, in the dose of half a grain to a grain, in syrup or some demulcent drink.

CYANURET OF ZINC—May be given with benefit in St. Vitus' dance, cramp of the stomach, nervous headaches, and general nervous debility, in doses commencing with one third of a grain, and gradually increasing as the patient will bear it.

CYNANCHE LARYNGEA.—Inflammation of the larynx or

uppermost part of the windpipe. The symptoms of this disease are scarcely distinguishable from croup.

In an inflammation of the larynx, or uppermost part of the windpipe, however, there is always some redness and swelling of the throat in sight, and a pain and difficulty in swallowing,—two appearances which are frequently absent in the true croup. In the croup, the inflammation is lower down the windpipe, or rather it does not extend so much above the larynx as to be in sight. On dissection of those who die of this disease, the lining membrane of the larynx is found inflamed and water effused under it.

The chief remedies are leeches to the throat, or bleeding from the arm, purgatives, sudorifics, a blister to the back of the neck, inhaling steam, and emetics. The disease, in general, requires a prompt depletion, and the same remedies are proper that are used in croup. See *Croup*.

CYNANCHE MALIGNA—Putrid Sore Throat—Canker Rash—Scarlatina Anginosa, Scarlet Fever.—The putrid sore throat takes all these names. In this disease there is a wide-spread ulceration of the throat, instead of a healthy suppuration, as in the inflammatory sore throat or quinsy. The ulcers are commonly covered with a white crust, but, in some instances, the coat will be black, as if the lining membrane were mortified. The inflammation is seated principally in the mucous membrane, or lining of the mouth and throat, and the accompanying fever is of the typhoid type. In some instances the affection is attended with a rash, and in others it exists without any eruption upon the skin. See *Scarlet Fever*.

CYNANCHE PAROTIDEA—Mumps.—See *Mumps*.

CYNANCHE PHARYNGEA—Inflammation of the Pharynx or Throat.—It is a disease of the same nature, and requires the same remedies, as the cynanche tonsillaris. They are both known under the common name of the inflammatory sore throat, or sore throat. See *Sore Throat*.

CYNANCHE TONSILLARIS—Inflammatory Sore Throat—Quinsy.—See *Sore Throat*.

CYNANCHE TRACHEALIS—Croup.—See *Croup*.

CYSTITIS—Inflammation of the Bladder.—See *Inflammation of the Bladder*.

D.

DANDELION.—This plant is commonly used for salad or greens in early spring. It opens the bowels and increases the secretion by the kidneys. It is nutritious, and cooling to the blood. In diseases of the skin, dropsy, jaundice, and consumption, it is no doubt efficacious. The juice of the roots is the most medicinal. A

strong tea made of the roots, and drank to the amount of two or three ounces, or a wine-glassful, three or four times a day, is the usual mode of dispensing it. The expressed juice of the dandelion is bitter, particularly of the root, and is doubtless strengthening, as well as aperient and diuretic. To have its proper effect, the plant must be used with as much freedom as other common herbs. An extract is made from the roots, the dose of which is from ten grains to a drachm.

DEADLY NIGHT-SHADE—*Atropa Belladonna*.—This plant grows to two or three feet in height. It is perennial and branching. The leaves are oval, and the flowers come out in mid-summer. It is found in unfrequented roads and by-places. The berry is round, green, changing to red, and, when ripe, of a shining black, resembling the black cherry in size and color. The inside of the flower is of a dull purple color.

The berry contains a juice of a nauseous, sweet taste, and of a beautiful, durable purple color.

The belladonna is a powerful narcotic and anti-spasmodic. It also promotes the secretion by the skin, by the kidneys, and by the salivary glands.

It is a deadly poison in an over-dose, and requires great caution in the use of it. It has the remarkable power of dilating the pupil of the eye, when the diluted extract is rubbed upon the eyelids. In extracting, depressing, or breaking up the lens of the eye, it is used by the operator to expand the pupil and to test its sensibility.

One grain of the powdered leaves, or root, is a dose for an adult. It is frequently used in the cure of palsy, epilepsy, and melancholy; in amaurosis, dropsy, rheumatism, gout, scirrhus, cancer, and the locked jaw. It is now chiefly used in the form of extract, beginning with a quarter of a grain at a time. In all painful affections it is a medicine of undoubted potency.

DEAFNESS—*Paracusis*.—Deafness sometimes arises from an affection of the nerve of the ear, and at other times from an inflammation and thickening of the drum,—the lining membrane of the ear,—and of the eustachian tube. Where it arises from a paralysis of the auditory nerve, it is very difficult to cure. It more commonly happens from an inflammation of the ear, which is manifested by intense pain, noise in the ear, and finally by a discharge of matter. The ears of children will often inflame, suppurate, and discharge matter, without the loss or diminution of hearing, but sometimes there will be such a disorganization of the apparatus of hearing as to destroy that sense entirely, or at least diminish very much its acuteness. There is a glandular structure in the ear which secretes the wax, and when these little glands are disordered, and there is a sense of dryness and of heat in the ear, the organ should be daily syringed with warm rain-water, or a little castile soap and water. A weak solution of sugar of lead, or of white vitriol, in rain-water, washed into the ear with a rag, or thrown in with a syringe, will abate the heat and reduce the in-

flammation. Dr. Thomas recommends that a solution of common table salt should be dropped into the ear; or a mixture of ox-gall and the balsam of Peru, in the proportion of three tea-spoonfuls of the ox-gall to one tea-spoonful of the balsam. If it is suspected that the nerve of the ear is affected or paralyzed, the organ should be subjected to shocks of electricity or galvanism. The organ should also be stimulated by dropping into it a mixture of the oil of almonds and the spirits of turpentine, in the proportion of four tea-spoonfuls of the oil of almonds to forty drops of the turpentine. A mixture of sweet oil and the water of ammonia, in the proportion of four tea-spoonfuls of oil to half a tea-spoonful of the ammonia, may be used in the same way. These substances are best applied to the ear upon a dossil of wool or lint. Ether will dissolve the wax, and lessen the dryness of the ear. Laudanum and the spirits of camphor are of great service in quickening the hearing. Where the ear is sensitive to the cold, a dossil of wool, worn in the ear, will secure it from the effects of the cold. When the internal passage from the mouth to the ear, called the eustachian tube, becomes filled up, it has been recommended to puncture the drum of the ear. Tobacco smoke has been forced through it, by holding the mouth and nose, and making an effort as if to force the smoke through the nose. When the smoke enters the ear, a cracking noise is heard. Injections have been made into the cavity of the ear through the eustachian tube, and we should judge this to be an excellent remedy, if properly done.

Deafness is sometimes produced in children by the swelling of the tonsils or almonds of the ear, and will often remain for a long time, but finally go off on the subsidence of the swelling. This is a frequent cause of deafness in children, but the disease is not permanent. The scarlet fever and the venereal disease are also frequent causes of deafness. The ulceration of the throat, from whatever cause, will often be the occasion of it. Where the eustachian tube is closed, it may be known by the blowing of the nose: if the tube is not closed, the drum of the ear will be forced out, and the pressure of the air upon it can be distinctly felt. Bathing the ear with cold water, in deafness of long standing, has perhaps been attended with as much success as any means which have ever been used. A course of mineral waters should be tried where it can be conveniently done. The waters should be drank, and the defective organ thoroughly bathed with them, both in a warm and in a cold state.

DECOCTION. — Any medicine made by boiling in water or watery fluid, is a decoction. Some medicines require to be boiled, in order to extract their virtues, while others only require to have cold, warm, or hot water poured upon them. When cold, warm, or boiling water is poured upon substances, and allowed to stand for a certain time, the mess is called an infusion. The medicinal properties of a great many substances are dissipated and lost by decoction or boiling, which are extracted and saved by infusion.

Steeping is what is commonly meant by infusion, and boiling is the operation meant by decoction.

DECOMPOSITION.—The separation of bodies into the elementary principles of which they are composed by heat. A stick of wood, placed upon the fire, is decomposed by the heat. It is first separated into carbon, hydrogen, and oxygen; and, finally, the carbon or charcoal is converted into carbonic acid gas, leaving a portion of ashes. When vinegar or cider is poured upon pearlash, the acid unites with the potash, and the carbonic acid gas flies off. The pearlash is separated into potash and carbonic acid, the elementary principles of which it is composed. In almost every decomposition of bodies, a new combination of their elementary principles takes place.

DEGLUTITION.—Deglutition signifies the act of swallowing the food after mastication, or after being chewed and mixed with the saliva and moisture of the mouth. The tongue presses the food back upon the upper part of the gullet or meat-pipe, which receives the masticated ball, and, by a series of muscular motions, carries it down into the stomach. Every time the act of swallowing is performed, the upper part of the windpipe is drawn up and down. This motion is distinctly perceptible, not only in men, but in the lower animals. Over the top of the windpipe there is a valve, or little fleshy lid, called the epiglottis, which is let down upon the orifice of that pipe every time anything is swallowed, to prevent it from entering. The muscles of the upper part of the gullet contract and press the ball of food or swallow of liquid upon the muscles below, which in their turn contract, and send the mass further along, until it reaches the stomach. In the descent of the food and drink into the stomach, there is an abundance of mucus poured out to lubricate the passage and protect it from harm, as well as to facilitate deglutition. It should be recollected that the upper part of the gullet, in medical language, is called pharynx, and the lower part of it œsophagus.

DELIQUESCENCE.—The change of certain salts or saline bodies to a liquid state, when left exposed to the air, by absorbing water from it.

DELIRIUM TREMENS.—It is but recently that the delirium tremens has been noticed as a distinct disease. It is an affection of the nervous system, caused by hard drinking, the constant use of opium, and other narcotics.

The excessive use of tobacco has been often known to produce a semblance of the disease, such as wakefulness, uneasiness, and giddiness.

In the delirium tremens there is a commotion in the system, which somewhat resembles the cold fit of an ague. There is an aberration or wandering of the mental faculties, and an uncontrollable trembling of the tendons and muscles, insomuch that the person cannot raise a tumbler or a bowl to his mouth, without dropping it, or spilling the contents, from the quivering of the hands. The person is constantly seeing objects and hearing

sounds which do not exist, and evinces a loss of judgment and reason. He thinks he sees insects on the wall and bed-clothes, or hears people talking in the adjoining rooms. He is sometimes hurried to acts of violence upon himself or others, and commits suicide or homicide to escape some impending imaginary evil. There is a total departure of sleep, and a constant muttering, as if there were great distress in the head. The pulse is quick and variable in force, sometimes strong, and at others weak and small. The breathing is short and quick; the surface cold; and often covered with a clammy sweat. There is not, in ordinary, much internal fever. The eye is glassy and wild, and the countenance haggard and pale. There is sometimes sickness and vomiting.

There can be no doubt, we think, that this disease is an inflammatory affection of the nervous system,—the brain and its branches. Both the trembling of the muscles and the inability to sleep are a proof of this. It is insanity, produced by the agency of substances which cause a degree of insanity every time they are taken. Alcohol and opium both occasion delirium, to a certain extent, when only taken in a moderate quantity. The frequent repetition of intoxication, which is an artificial delirium, finally ends in a disease or affection more permanent. Intoxication is no doubt a very near approach to an inflammation of the brain. It produces an enlargement of its vessels, and a strong determination of the blood to the head. This state of the brain being produced daily, for weeks and months in succession, can but end in a tender, sore, painful, and inflamed condition of the nervous system. The sore state of the brain prevents sleep, and destroys the energy of the voluntary power.

Domestic Remedies.—The person affected with delirium tremens should be secluded from company; confined to the house, and closely watched; and, if need be, secured either by sufficient help or by straps. Everything should be done to compose the mind and to produce sleep. The room should be darkened, and no conversation held to awaken the attention of the patient. The head should be bathed with cold water, or vinegar and water, and the feet bathed in warm water. The room should be comfortably warm, and the person fed on gruel, broth and milk porridge, rice, rye puddings, and hominy. The surface of the body should often be sponged over with tepid water. If there is vomiting, an emetic of ipecac. should be given, followed by camomile tea. Full draughts of poppy or hop tea should be drank, as often as every two hours. As much nourishment of a liquid nature should be introduced as the stomach will bear. If the person can take nothing by the stomach, broth or warm milk should be insinuated by injection. We are neither in favor of giving ardent spirits, as is the practice of some, nor much opium. It is a disease which is generally long in being contracted, and requires time to recover from it. Rum or opium, whichever has produced the disease, first destroys the appetite, and occasions an emptiness of the stomach and of the blood-vessels. The body, in ordinary, has suffered for

want of nourishment. But little new blood is made in the system, and the brain and all the other organs are in a famished state. The system needs not stimulus, but the empty blood-vessels need to be replenished with their accustomed food, the blood.

Lemonade and soda-water are very good and grateful drinks, but molasses and water with a little ginger in it, or warm milk and water, will answer very well, and afford some little nourishment. Most cases recover in the course of a week or fortnight, and need no violent remedies. The symptoms will sometimes be alarming, but in the great majority of cases the person recovers without much medicine. The person goes without sleep, until a kind of syncope or fainting takes place, and then the nervous system is prepared to be refreshed by sleep.

The calcined magnesia, by its operation upon the kidneys as well as the bowels, is the most suitable physic to give. The bowels should be kept free, but nothing more. Perhaps it is better to allow the patient the liberty of the room than to confine him too closely to the bed. The symptoms in this disease must be obviated by medicine pretty much as the occasion requires. Some cases will require much more to be done than others. The evil of overdoing, in this disorder, and in all others, is almost as common as that of not doing enough. In some cases it will be best to make use of half a tea-spoonful, or a tea-spoonful, of the solution of the sulphate of morphine; or to give camphor, cicuta, and hyoscyamus; but in general the best medicines to quiet the commotion of the brain, and to restore sleep, are the sweet spirits of nitre, Hoffman's anodyne liquor, and the acetate of ammonia, in the state of effervescence.

Professional Remedies.—Where the brain appears, by the redness of the face and the force of the pulse, to be overloaded with blood, either leeches should be applied to the head, or blood should be drawn from the arm. But this is not often required. In some cases, more quietude is obtained by the use of cathartics than by any other mode of depletion. But we believe that sustenance is oftener required in this disorder than depletion. Dr. Ware, of Boston, with great good sense and judgment, discourages the use of ardent spirits and opium in this disorder, and from his own practice, which is very extensive, has recommended a reliance upon moderate evacuations and cooling medicines. We do not say but people may be cured by stimulants and narcotics, but they do not appear to us to be the most suitable remedies. At night, while the patient is in bed, the room should be kept rather cool, as coldness, to a certain extent, favors sleep. In some cases, the quinine and the preparations of iron should be given; but whatever is given, the stomach should be supplied with sufficient nourishment.

DEMULCENT.—Mucilaginous and oily medicines, which sheathe the tender and raw surfaces of diseased parts, and, by mixing with acrid and corrosive matters in the several passages of the body, neutralize their effects. The most common demulcents are flax-seed tea, oil of almonds, solution of gum arabic, arrow-root tea, mullein tea, and a solution of the slippery-elm bark.

DENARCOTIZED OPIUM. — This preparation of opium relieves pain and induces sleep without the disagreeable effects of constipation, and with less interruption to the secretions by the kidneys and skin than attends the pure opium. Laudanum is made of it, the same as of opium, and the dose is the same quantity, from twenty to thirty drops. In lung affections it seems to be much preferable to pure opium; but in dysentery and other bowel complaints, inferior to it. In nervous complaints the denarcotized opium is a more suitable medicine than the opium itself.

DIABETES. — This is a rare disease in our country; but very few cases of it ever occur in the practice of any one physician. The diabetes manifests itself by the secretion and discharge of a great quantity of urine. It seems to hold the same relation to the kidneys which the diarrhœa holds to the bowels. In a diarrhœa everything taken into the stomach runs off by the bowels, and in diabetes everything taken into the stomach runs off by the kidneys and bladder. In a diabetes there is much more urine discharged than in a state of health. By what process both the food and the drink should be converted into urine to such an extent, it is not easy to conclude. The diabetes seems also to bear some relation to the night sweats in a hectic fever, or rather the action of the kidneys seems to resemble that of the skin in this disease. It is very evident that the secretory power of the kidneys in this disease is very much exalted. The kidneys, in the diabetes, are probably in the same state that the liver is in when there is an unusual flow of the bile, or that the lungs are in when there is an unusual secretion and expectoration of mucus or phlegm.

There is, in general, but very little, if any, pain or soreness felt in the urinary organs in this disease, or any heat or swelling in these parts; but still we can hardly avoid the conclusion that there must be a certain degree of inflammatory action, or an action which results from an irritation of the kidneys. To come nearer the point, we believe there must be an extraordinary fulness of the blood-vessels of the kidneys — a bloodshot state, redness, and some degree of tenderness. When there is a great running of mucus and water from the eyes, although there may be no actual soreness, swelling, or heat, there is always a bloodshot state, and a greater degree of redness and tenderness than usual. We think this must be the state of the kidneys in the diabetes. This state of things may not appear on dissection, after death; but that it really exists, we think there can be but little doubt. A considerable degree of inflammation of the eyes may exist before death, which cannot be detected after it. The arteries which carry the red blood, the cause of the redness of the part in inflammation, are, after death, empty; and, of course, the part will appear very much like the sound parts, unless there is suppuration, ulceration, or a permanent thickening of the part, or some unusual

distention of the veins; in which case, the part inflamed will appear of a purple color, or rather of a venous red.

The diabetes usually comes on gradually, and without any general disorder of the system. Besides the immoderate discharge of the urine, there begins to be thirst, and, sometimes, an inordinate appetite; the flesh begins to fall away, and the system to become weak; the pulse grows more frequent, and there is more or less fever resembling the hectic.

The bowels, in this disease, are costive, and the urine of a clear color and of a sweetish taste. The drinks appear to pass immediately through the diseased organs. Nervous people are apt to make a great deal of water, but this does not constitute the disease in question. The diabetes constantly wastes the flesh and debilitates the system, but no such effect follows the redundancy of water made by nervous people.

Dr. Cullen supposed the disease to be owing to some fault in the organs and vessels which convert the food and drinks into blood; or, in other words, that the chyle was not perfectly elaborated before it entered the blood-vessels. But if this was the case, it would not be the kidneys only that would be affected, but every other organ in the body. The lungs and the liver must feel the imperfection of the half-elaborated blood, as well as the kidneys. The skin, too, would be as likely to let loose a flood of perspiration, as the kidneys to secrete an inordinate quantity of urine.

The kidneys, on dissection, are found enlarged and their blood-vessels in a relaxed state.

The disease often arises in consequence of intemperance; sometimes, of intermittent fevers, and of a broken constitution; and occasionally, of substances taken into the stomach, which operate particularly upon the kidneys, such as mineral waters and cantharides. It is sometimes produced by protracted cases of gonorrhœa, where the urinary organs have been injured by the use of too strong injections or by continuing them too long.

Remedies.—The diet, in this disease, must be restricted to animal food, such as beef, mutton, poultry, and fresh fish. Eggs may be eaten, but milk is to be avoided, unless it is used as the vehicle of some medicine, as alum, or some other astringent or tonic medicine. The chief remedies are such as will restrain the action of the kidneys. Alum, sugar of lead and the white vitriol, are the most powerful. Three grains of powdered alum, which, in bulk, is about as large as a pea, should be swallowed in molasses or syrup, four or five times a day. Small doses of sugar of lead, or of the white vitriol, taken about as often, may also be tried. A tea made of powdered logwood, or of oak bark, will restrain the discharge of the urine. A pill of clear opium, about half the common size, taken morning and evening, will check the discharge the most effectually of any medicine in use. The poppy tea will have a similar effect.

To operate upon the bowels, and to remove the costiveness,

salts will be found the most serviceable. The system must be strengthened by the use of quinine and bitters; the exercise must be exceedingly gentle.

Spring waters which contain iron are very suitable in this disease. One scruple of Peruvian bark, one scruple of the wild cranberry leaves, powdered, and half a grain of opium, mixed together, and taken three times a day, have been found a cure for the disease. The doses are to be taken in lime-water. The lime-water should be used for drink, in this disease.

In the commencement of the disease, leeches should be applied to the small of the back, and an endeavor made to remove the irritation. Cold bathing, especially to the small of the back, should be practised, beginning at first with tepid water, and gradually using it colder. The catechu and kino, either in the form of tincture, or in powder, are the most powerful vegetable astringents, and will be among the most proper to use in this disease. The cicuta and hyoscyamus should be tried. Laudanum and pure opium are more proper in the diabetes than the morphine. The creosote and tannic acid should be tried.

The nitric acid, — aquafortis, — has been found extremely useful in some cases. But in every case the strength must be supported by tonics, and the excessive discharge of urine restrained by the use of sedatives and astringents. A gruel made of wheat flour will be found a suitable drink, together with lime-water, oyster-shell water, and pure rain-water.

DIACHYLON.—This famous plaster is made of the semi-vitrified oxide of lead and olive oil, in the proportion of one part of the lead to two of the oil, boiled together. In bruises, excoriations of the skin, indolent tumors, and slight inflammations upon the surface, it is an excellent substance for a plaster. It is sometimes applied to broken breasts.

DIAGNOSIS.—Symptoms, by which one disease is distinguished from another. All such symptoms are called diagnostic.

DIAPHORESIS.—This is a medical word which signifies perspiration or the act of sweating.

DIAPHORETICS.—Any medicine, or any substance, which, when taken into the stomach, produces a sweat, is called a diaphoretic. Catnip, pennyroyal, and the bayberry root, are diaphoretics. The most certain diaphoretic is tartar emetic, in the dose of a fifth or quarter of a grain. Next in certainty to this is the antimonial powder. Many medicines operate as emetics, diaphoretics, cathartics, expectorants, and diuretics, such as the squill, ipecac., and thoroughwort. Diaphoretic and sudorific mean the same thing.

DIAPHRAGM.—This is a medical name for the midriff. It is the muscular sheet of flesh which separates the cavity of the chest, or the thorax, from the belly.

The contraction and dilatation of the diaphragm, or midriff, comprise the chief agency in breathing. The midriff being convex on the side towards the lights, becomes a plane when it contracts,

and makes room for the drawing in of the breath; and when it relaxes, it becomes convex again, and forces the air out of the lights. The bowels and other organs contained in the cavity of the belly press upon the midriff and contract the cavity of the chest, by which means the air is breathed out. The abdominal viscera are moved upward and downward by the contraction and relaxation of the abdominal muscles.

DIAPHRAGMATIS—Inflammation of the Diaphragm.—This disease is attended with pain in the region of the diaphragm, or midriff, difficulty of breathing, and delirium. It is rarely ever distinguishable from an inflammation of the lights or pleura; it is of the same nature, and demands the use of the same remedies.

DIARRHŒA—Looseness of the Bowels.—This disorder consists in an increased motion of the bowels, with more or less pain preceding and accompanying every evacuation. There is commonly little or no fever, and even the appetite is but slightly affected. The surface of the body and the extremities are apt to be cold, and the perspiration diminished or suppressed. There is often soreness, or, at least, tenderness, on pressing the belly, and other indications of a slight inflammation of the mucous membrane of the bowels. But, in general, the disease does not appear to be of an inflammatory nature, or if inflammatory, the self-depleting nature of it never allows the inflammation to become very violent. It is said, by some authors, to be an irritation of the bowels; but the distinction between irritation and inflammation is more nice than real, and of no service in the cure of the complaint.

The discharges in this complaint are always thin and watery, and will frequently occur as often as a dozen or twenty times a day. There is much less pain, griping, and fever, in diarrhœa than in dysentery; and there is also an absence of blood, and, for the most part, of mucus, in the stools. In the dysentery, especially, in the commencement of it, the stools are hard and compact, and mixed with mucus and blood.

The diarrhœa is sometimes attended with vomiting; but this is not apt to be very violent or to last long. In the cholera morbus, the vomiting and distress at the pit of the stomach are the leading symptoms, but in the diarrhœa, the disturbance of the stomach is only a secondary affection. The diarrhœa never discovers that sudden prostration of the strength and quickness in breathing which mark the cholera morbus.

The predisposing cause of diarrhœa appears to be the same with that which produces the cholera morbus—the action of the summer heat upon the system. It is a disease of the hot months, like cholera morbus, and is a similar disease of a part of the same viscus. The diarrhœa is a disease of a part, and the cholera morbus of the whole, of the digestive organs.

The causes of this disease are, either the quantity and quality of substances taken into the stomach, the action of the bile and other secretions flowing into the bowels, or a slight species of

inflammation induced by the heat of the season, or the atmospheric changes.

This disease prevails most in the season when green fruit and vegetables of all kinds are most abundant. And perhaps there is no one thing which produces it oftener than green corn, or corn and beans. Cucumbers and other garden vegetables are a prolific cause of it. Shell-fish often produce it. Too great a mixture as well as quantity of food, will disorder the bowels and leave a diarrhœa. Almost any indigestible substance will be followed by the complaint, if taken in sufficient quantity. Small solid bodies, one or two at a time, will often, however, pass through the stomach and bowels with impunity, such as stones, smooth pieces of glass and silver, balls of lead, and the kernels of fruit.

The quality and quantity of the bile, of the pancreatic juice, and of the natural mucus of the intestines themselves, appear often to generate the disease. In many cases the discharges will appear to consist almost entirely of bile; and, in other instances, of watery matter, as if it came from the bowels themselves.

In other instances, the pain, tenderness and soreness of the bowels, the frequency of the discharges, and some degree of fever, will denote a certain degree of inflammation in the inner coat of the intestines. In children, teething almost always produces more or less of a diarrhœa. The inflammatory action in the gums is extended to the digestive organs.

A sudden check to the perspiration is a frequent cause of the diarrhœa. It is not, in general, a dangerous disease.

Remedies. — Where the disease has been immediately preceded by a hearty meal, or by eating food difficult to digest, the stomach should be relieved by an emetic. After the stomach is unloaded, the bowels should be freed by a dose of castor-oil, rhubarb, or butternut physic.

The food should consist of a gruel made of flour or crackers, of boiled milk and water, or stale white bread soaked. No solid food should be taken until the complaint is cured. In most cases, a milk porridge made with flour meal will be found sufficiently nourishing, and well suited to the diseased state of the bowels.

Cold water may be drank, but too great a quantity of it will increase the disease. Mullein and flax-seed tea, gum-arabic water, and rice-water, constitute the most proper drinks.

If the disease continues severe, forty drops of laudanum should be given, once in eight hours, until the discharges are stopped. In general, there is no danger in stopping the complaint, as the bowels can, at any time, be readily moved by a dose of oil, rhubarb, or some other purgative. A grain and a half or two grains of opium will often answer better than the laudanum. A table-spoonful of paregoric may be given in the place of either, and repeated at the same intervals. The best way is to check the complaint entirely by opiates, and to procure a motion of the bowels, every other day, by a dose of oil.

In some cases, astringent medicines will have more effect than

opiates. One of the best astringents is the logwood tea. A tea-cupful of this must be drank every three hours through the day. If this proves disagreeable to the stomach, twenty grains of the powdered catechu, infused in warm water, may be taken, and repeated at the same intervals.

It is of the utmost importance, in the treatment of this disease, to adhere to a light, vegetable, liquid diet; this alone will in many instances effect a cure.

If the disease has become chronic, it will sometimes be necessary to administer a little brandy several times in the course of the day. Spices and quinine will also be proper. We have known the disease, in its chronic stage, in many instances, to be cured by ipecac., in two or three grain doses, given twice or three times a day. In this stage, chicken and meat broths and plain soups will often be required to support the strength.

If there is much heat, soreness, and pain in the abdomen and bowels, it will be advisable to apply a dozen leeches. It is seldom necessary to draw blood from the arm. In more moderate cases, blisters should be drawn upon the abdomen. A moderate use of calomel, or a grain every night, combined with a grain of opium, may be tried in chronic cases where other means fail, and continued for a week. The Dover's powder, in ten grain doses, given once in four hours, will cure the disease.

The mineral astringents, such as sugar of lead, white vitriol, alum, and borax, are often found serviceable in protracted cases. Large plasters of pitch upon the back and belly, by retaining the heat, will assist very much in restoring the proper function of the bowels.

In some instances, mild astringents, such as an infusion of peach-meats, hardhack, or the root of the crane's-bill, will be found more effectual than powerful ones.

In all cases, the heat of the body should be properly regulated, the feet should be kept dry, and the patient should remain at rest. All motion increases and aggravates the disease.

DIATHESIS. — Any particular state of the body. In a putrid fever there is a putrid diathesis, and in the continued fever there is a febrile diathesis, or a state of the body which predisposes it to fever.

DIFFICULT MENSTRUATION — Dysmenorrhœa. — The monthly sickness of females, in some instances, is attended with pain in the region of the womb, and in the back, loins, and lower part of the abdomen. Menstruation is not entirely suppressed, but is troublesome and difficult. The best remedy at the time is to take ten grains of the Dover's powder, and to employ a local steam bath, of hot herbs, such as tansy, spearmint, and pennyroyal, on the approach of every return of the difficulty. Thirty drops of morphia is a suitable medicine. In obstinate cases, the warm bath should be used, every other day, and two table-spoonfuls of Griffith's iron mixture taken twice a day. The body should be kept comfortably warm and the feet dry. During the

intervals, much and constant exercise should be taken in the open air, the food should be light and nourishing, and the bowels kept open by the use of the aloetic pill, or the extract of butternut, if they are liable to be confined. See *Monthly Sickness*.

DIGESTION.—The process of digestion is not finished until the food and drink pass from the stomach into the small intestines, and combine with the bile, the pancreatic juice, and the mucous secretion of the bowels. It is now ascertained, with a good deal of clearness, that the conversion of the food into chyme is mainly effected by the agency of the gastric juice. In what way this powerful menstruum or solvent operates upon the aliment, is not definitely known, but it evidently appears to be a chemical action. It has been proved, by experiment, that aliment contained in hollow metallic balls, pierced with holes, is digested the same as if it were free in the stomach. Hollow silver balls, enclosing meat and other substances, have been swallowed, and disgorged, in every state of digestion, and their contents found to have undergone the same change as food swallowed in the ordinary way. The gastric juice enters the perforations in the balls and converts the food into chyme. The gastric juice is a ropy, sourish, transparent fluid, and, when analyzed, contains a large quantity of water, with mucus, salts, and lactic acid. The base of the salts is soda and ammonia.

The chyme, or the fluid substance into which the food is converted by the action of the gastric juice, is a uniform, soft, pulsataceous, grayish mass, of a sweetish, insipid taste, and slightly sour, retaining something of the flavor of the food.

The food is chewed and broken to pieces by the teeth; mixed with the saliva and the mucous juices of the mouth, throat, and gullet; received into the stomach; acted upon by the gastric juice; propelled from the stomach into the duodenum, where it combines with the bile, pancreatic juice, and the mucus of the intestines, and finally is converted into a milky fluid, called the chyle. From the duodenum, or first portion of the intestines, the mass of aliment passes into the second and third portions of the small intestines, where the chyle is separated from the fecal matter by the action of the lacteal vessels, and carried by the thoracic duct into the left subclavian vein, or the great vein of the left arm. While the food undergoes a conversion into chyme, both orifices of the stomach are closed.

The ordinary period of digestion is about three hours, though the time varies from three to seven hours. The refuse of the food is not expelled oftener than once in twenty-four hours. Probably digestion is not entirely completed short of twenty-four hours. Children who live on milk digest their food much quicker than adults. The more perfectly substances are animalized, the quicker they are digested; meats are digested sooner than milk, and milk sooner than vegetables.

The gastric juice is known to curdle milk and albumen.

The gastric juice appears to be capable of dilution, or being weakened by water, the same as other menstrooms. If a great

deal of water or watery fluid is drank, the gastric juice loses its strength and becomes less solvent. No more fluid should be drank than is necessary to quench the thirst, otherwise the power of digestion is enfeebled.

The power of digestion seems to be the greatest in the morning, after a night's sound sleep. The passions and emotions of the mind greatly influence the function of digestion. Some diminish the power of digestion exceedingly, while others invigorate it.

DILUENT. — It is very evident that by drinking a large quantity of water the proportion of water in the blood will be increased. The blood is thus made thinner, or diluted. Water is the only proper diluent, although other substances are often added to it to give it flavor and smoothness. No point is better settled in medicine than the propriety of giving diluents in acute inflammations. There is certainly nothing in water which can increase an inflammation, and it appears to act with as much certainty in subduing a fever as in extinguishing a fire. Too much water may be detrimental after the subsidence of a fever or an inflammation. The object of giving diluents in acute inflammation is to lessen the stimulant quality of the blood. Flax-seed tea, balm tea, gum-arabic water, lemonade, soda-water, slippery-elm tea, and barberry-water, are among the most common diluents.

DIMNESS OF SIGHT, called *Gutta Serena*, and sometimes *Amaurosis*, is supposed to be a paralytic affection of the optic nerve. The natural appearance of the eye is not altered in this affection; but the cornea, pupil, and the ball of the eye, will look as well as ever, at the same time that the sight will be very dim or entirely destroyed. The pupil is, however, generally rendered incapable of contraction. In this affection there will often appear to be motes or flies continually floating before the eyes. Although there is no appearance of inflammation in the eye, yet it is often preceded by a violent headache and a general affection of the nervous system. In one case which came under our care, the dimness of sight had been preceded by headache for several years. The pupil became fixed and insensible to the light, and there was, in the end, a total loss of sight. Blows upon the head have been known to produce it, and also a constant exposure to the rays of the summer sun. The growth of tumors in the brain, which press upon the optic nerve, has been ascertained to occasion it.

The remedies which have been found to be the most effectual in this disease are electricity, galvanism, and pungent snuffs. The dried bayberry root, reduced to an impalpable powder, is one of the most powerful snuffs which can be used. The turpeth mineral is sometimes used, mixed with other snuffs. A tea made of the red pepper, in the proportion of one grain of the pepper to one ounce of water, has sometimes been dropped into the eye with the view of stimulating the nerve. It produces an intense pain, for a short time, but the effect is very promising. In this affection, in passing from a dark room into the light, there is no contraction of the pupil as in the healthy eye. Blisters and setons are highly re-

commended in the disease. We advise the person to try a course of the mineral waters, to pursue a vegetable diet, and to take a great deal of exercise.

DISEASES OF THE SKIN — Cutaneous Diseases. — See *Cutaneous Diseases*.

DISLOCATIONS OF THE ANKLE. — When the ankle joint is dislocated, or put out of place, the foot is either turned outwards or inwards, or it is pushed forwards or backwards.

The foot is most commonly thrown outwards, and its inner edge rests upon the ground.

In reducing or setting the ankle, the patient should be placed upon a bed, on his injured side, and the leg should be bent, in order to relax the stretched muscles. An assistant should then grasp the foot and gradually pull it in a line with the leg. The thigh must be held fast, and the tibia or shin-bone pressed downwards to force it into its place. The foot must always be drawn slowly and steadily, to give the muscles and cords time to relax. Sometimes there is such a tension of the muscles and cords, and swelling of the joint, as to require blood-letting and other relaxing measures.

After the ankle is set, a snug bandage should be placed around it, and kept wet with vinegar or new rum.

When the dislocation is outwards, the foot is turned inwards, and its outer edge rests upon the ground. In this case, the extension is made in the same way as in the first. One person takes hold of the ham and holds the thigh fast, while another stretches the foot, and the operator presses the head of the shin-bone inwards towards its proper place. The limb should rest on its outer side, after being set.

If the dislocation is forwards, the foot is shortened and the heel is lengthened. In this case, the extension is made as before, and the bone-setter pushes the bone of the leg back into the socket. If the dislocation is backward, the foot is lengthened and the heel shortened; the tibia, in this case, must be pushed forwards while the proper extension is made.

In dislocations of the ankle, the person may begin to use the foot gently in about three weeks. The joint must be supported by splints, pads, and bandages, and kept perfectly still.

DISLOCATIONS OF THE ELBOW. — The elbow joint may be dislocated in several different directions, but the dislocation of both bones of the fore-arm, backwards, is the most serious.

To set the joint, in this case, the patient must be seated in a chair, and the knee of the bone-setter put on the inner side of the elbow joint; the fore-arm must then be bent, and, at the same time, both bones of the fore-arm pressed by the knee, so as to separate them from the humerus, and to raise the hooked end of the ulna, or large bone of the fore-arm, from the hollow in the humerus where it is lodged. Whilst the pressure is kept up by the knee, the arm is to be forcibly and gradually bent, and the bones will slide into their places.

The elbow and fore-arm must be carried in a sling, after a proper bandage is placed around them, and kept wet with warm vinegar, or a solution of muriate of ammonia, — sal ammonia. All the other kinds of dislocation of this joint are set in nearly the same way. The principal thing to be attended to is, to make extension enough for the heads of the bones to clear each other and to slide into their places.

DISLOCATIONS OF THE JAW. — The lower jaw may be put out of joint by blows, falls, and sometimes even by yawning. The jaw is easily set. The operator has only to put his two thumbs as far into the mouth of the patient as he can, and to press them hard down, while the chin is gently raised. The bones easily slide into their places. The jaw is known to be out when the upper and under teeth do not correspond, or come together.

DISLOCATIONS OF THE KNEE JOINT. — The knee joint may be displaced in four different directions, — inwards, outwards, forwards, and backwards, but the bones are replaced in the same way in all.

A firm, constant, and gradual extension of the leg is all that is needed to enable the heads of the bones to ride over each other, and to slide into their places. The thigh must be held fast by one assistant, while another pulls upon the leg. Great injury is often done to the ligaments in a dislocation of the knee, followed by inflammation. In this case leeches, salts, and other means of reducing inflammation must be used.

DISLOCATIONS OF THE KNEE-PAN. — The knee-pan may be displaced in three ways, — outwards, inwards, and upwards.

In setting this bone, the patient is placed upon a bed, or the floor, and the leg raised by lifting it at the heel, in order to relax the muscles. The operator is then to press on the edge of the pan which is the most distant from the joint; by this means the inner edge of the bone is raised over the elevated portion of the thigh-bone, called the condyle, and the muscles draw the knee-pan into its place. The same applications are to be made to this as to the other dislocations.

DISLOCATIONS OF THE NECK. — When the neck is dislocated, the patient is deprived of all sense and motion, and his chin lies upon his breast.

The bones of the neck are set simply by extension. If the head is gently and firmly pulled in a line with the body, while the patient lies upon his back, the bones will easily slide into their places. As soon as the bones are set the patient begins to breathe.

DISLOCATIONS OF THE RIBS. — The ends of the ribs which join the back-bone are said sometimes to be displaced by falls and strains. To set a disjointed rib, the patient must be laid upon his belly on the floor or table, while the operator endeavors to crowd the head of the bone into its place. Some little displacement of the ribs may happen, but we believe a dislocation is very rare.

DISLOCATIONS OF THE SHOULDER.—The shoulder may be dislocated in three several ways;—it may be thrown down into the armpit, drove forwards upon the collar-bone, or backwards upon the shoulder-blade. It is most commonly drove down into the armpit.

In the last case, the patient cannot raise his hand to his head; and if the elbow is carried outwards at right angles with the trunk, the head of the bone can be distinctly felt in the armpit. The arm is rather longer than the other, and the elbow is pushed off from the side. It commonly occurs from falling upon the shoulder.

To set the shoulder-joint, the patient must be placed in a chair, and the shoulder-blade confined by a long, strong strip of new cotton cloth passed under the arm and over the well shoulder; or the arm may be put through a hole in the cotton bandage, and the bandage drawn over the shoulder-blade; one or more persons must hold fast the shoulder-blade while another makes an extension of the arm. A handkerchief or towel is sometimes tied around the arm, just above the elbow, to pull upon. The operator must put his knee into the armpit, and when the proper extension is made, lift the head of the bone with his knee, while he guides the bone into the socket with his hands. Sometimes the body of the patient is simply held by an assistant, while the operator extends the limb, and, with his knee in the armpit for a fulcrum, lifts the shoulder-bone into its place. In setting the shoulder, the arm must be raised at right angles with the body. The operator may tie a towel about his neck, after passing it under the arm, and lift the head of the bone into its place, by raising his neck.

In extending the arm, the force should be applied for three or four minutes, in order to give the muscles and cords time to relax. When the head of the bone is thrown forwards upon the collar-bone, or backwards upon the shoulder-blade, it is set in the same way. The body is to be confined in the same manner, and the extension made in the same way. When the bone, however, is thrown down beneath the collar-bone, the extension should be at first obliquely downwards and backwards, until the bone has cleared all impediments. The arm should be carried in a sling to support the shoulder.

DISLOCATIONS OF THE THIGH OR HIP JOINT.—The thigh-bone may be dislocated in four different directions; upwards, or upon the back of the haunch-bone; downwards, or into the oval opening, called the foramen ovale; backwards and upwards, or into the ischiatic notch; and upwards, upon the share-bone.

In most cases, the head of the thigh-bone is pushed from the socket upon the back of the haunch-bone. The leg will be about two inches shorter than the other, and the knee and foot will be turned inwards.

In setting the thigh-bone, the lower part of the trunk must be firmly fixed by girts, or it may be held by assistants. The patient

must lie upon the back, and a strong girt or bandage placed around the leg, just above the knee, to pull upon. Pulleys are used to make the extension, by professed surgeons. But two or three strong persons are commonly able to draw the bone into its place. The extension must be made for four or five minutes before the muscles will give way. The operator must guide the head of the bone and lift it over the edge of the socket. The patient can lie with a bed-post placed between the thighs, in the crotch, and the limb reduced in this way.

When the head of the thigh-bone is thrown down into the foramen ovale, the leg is about two inches longer than the other, and the head of the bone, in thin people, can be felt. The empty socket can also be felt.

The extension is made in a similar way as in the first case, and the bone is lifted into its place by the operator in very much the same way. The main thing with the operator is, to ascertain where the head of the bone is, and where the socket is; if he perceives these two points clearly, there will be no difficulty in setting the bone.

Dislocations in the two other directions are set in a similar way with those described.

DISLOCATIONS OF THE WRIST.—In dislocations of the wrist joint, the head of one or both bones of the arm can commonly be felt. The bones of the arm are either pushed over the bones of the wrist, or the bones of the wrist over the heads of the radius and ulna.

To set the wrist joint, the operator must grasp the patient's hand with his right hand, and the arm with his left; and an assistant must hold fast the arm above the elbow. Both the operator and assistant must then pull gradually until the bones slip into their places. A roller should be applied round the arm, and a flat piece of board applied to the back and fore part of the arm. The joint should be kept wet with vinegar, or a solution of sal ammonia.

The joints of the thumbs and fingers are set by simply making the necessary degree of extension.

DISTURBED SLEEP.—Nightmare, sleep-walking, sleep-talking, painful dreams and frightful images, all appear to be phenomena of the same nature, and probably arise from the same cause. A greater or less degree of nervous derangement will generally, if not always, be found to accompany disturbed sleep. The phenomena of the brain, by which we mean the thoughts, the feeling, the emotions, and the passions, are deranged or disturbed in the same way that the digestion, or any other function, is disordered. The symptoms of the disorder are of a different nature, but the state of the organ is doubtless the same. A disorder of the stomach is manifested by acidity, flatulency or wind, eructations of the contents of that viscus, and sometimes pain at the pit of the stomach. A disorder of the brain is manifested by painful thoughts and feelings, both while awake and in sleep. The degree in which the

brain and nerves are liable to be affected, is as various as that to which the other parts and organs of the system are liable. A person in sleep is affected by the same thoughts and feelings, passions and emotions, to which he is subject while awake. When a frightful image presents itself in sleep, it raises the same passion of fear as when awake, and a semblance of the same efforts are made to avoid it. The person endeavors to scream, and to run from it; but the usual command of the limbs and muscles is paralyzed by sleep, and he is incapable of making anything but convulsive movements, broken sounds, and ineffectual screams. A nightmare is produced by the fear of some object which is seen in sleep, or some condition which the person believes himself to be in; and that object or condition is as real as if the person were awake. He therefore acts, or tries to act, as if he were awake and in real danger. The fright which we experience in a nightmare will often last us for some time after we have awoken, which evinces that the passion of fear has been very much excited. Children will often laugh, and cry, and utter screams, in their sleep, which only shows that their minds have been agitated with the passions, joy, sorrow, or fear. In general, we believe that those people who are subject to considerable or unusual fear, grief, anger, and anxiety, in their waking hours, are subject to the same thoughts and feelings while asleep, and are, consequently, more liable to nightmare, sleep-walking, sleep-talking, and frightful dreams, than those who are more cheerful and blithesome. Gloom is not entirely removed by sleep, although it may be alleviated. Sleep-walking and sleep-talking are produced by some agitation of the mind, or of the feelings, which prompts the person to make those attempts to do and to say some things which excite in him great anxiety, desire, or aversion. No ordinary thoughts and feelings could produce these efforts in sleep; the person must be oppressed with some extraordinary care, either real or imaginary. Walking in the sleep is no more mysterious than turning over in bed; it is only making habitual movements; the person is only more awake and agitated with feeling in the former case than in the latter. Frightful dreams, and strange, absurd, incoherent images, the ideal presence of ghosts and hobgoblins, and the horrible accidents which we encounter by sea and land in sleep, are a slight disorder of the brain or of the nervous system, a small degree of inflammation or sensitiveness, such as sometimes happens to the eye, by which the vision becomes slightly painful and inexact.

The cure for disturbed sleep is the same as for nervous diseases in general; — a good deal of exercise; a wholesome, moderate diet; temperance; the avoidance of hard study, and, as much as possible, the perplexities and vexations of life. Sometimes, in cases of costiveness, a pill of aloes, or a dose of *picra*, may be serviceable; and, in aggravated cases, a few drops of *assafœtida*, *laudanum*, or some other anodyne, may be advisable. Over-eating, which is a prolific cause of disturbed sleep, should never be indulged, especially at bed-time.

DIURETIC.—All medicines which augment the flow of the urine are called diuretics. The most certain and effectual diuretic is saltpetre, or sal nitre. Squill, sweet spirits of nitre, acetate of ammonia, balsam copaiva, parsley, wild cranberry, tartar emetic, pumpkin-seeds, water-melons, and, in general, all watery fluids, are diuretic.

DOCK.—There are two kinds of this plant; one is called the yellow-rooted water dock, and the other curled dock. Both kinds are laxative and astringent. The medicinal properties reside in the root and leaves. The yellow-rooted water dock grows in shallow rivers, pools, and wet ditches. The curled or narrow dock grows about barn-yards, and in pastures. The root of both is of a yellow color. A decoction of the root of either species makes an efficacious wash for foul ulcers and sores. An ointment made of the narrow dock will cure the itch. A tea made of half an ounce of the fresh roots will operate as a mild purgative. In the blotched face, tetter, and salt rheum, it should be used both as a laxative and an ointment to the skin.

DOSES OF MEDICINE.—The following scale has been established for the regulation of the doses of medicine in general.

If the dose for a person of middle age be one drachm, the dose for one from fourteen to twenty-one years of age will be two scruples, or two thirds as much.

From seven to fourteen, half a drachm, or one half.

From four to seven, one scruple, or one third.

The dose for a child of four years will be fifteen grains, or one quarter.

For a child three years old, ten grains, or half a scruple.

For one two years old, eight grains.

For one a year old, five grains, or one twelfth as much as for a person of middle age.

Women, in general, require smaller doses than men, owing to a difference in size and constitution.

DOVER'S POWDER.—This powder is made by grinding together, in a mortar, one part of ipecac., one part of opium, and eight parts of vitriolated tartar or sulphate of potash. The several ingredients must be triturated to a very fine powder.

This powder is thought to be the most certain sudorific which we possess. It was the invention of Dr. Dover, and probably one of the happiest combinations which was ever made. In rheumatism, it has always maintained a high reputation as an effectual remedy. The usual dose for an adult is ten grains; for a child two years old, two grains. In this medicine, the heating, feverish, and astringent effects of the opium are counteracted by the ipecac. and the neutral salt. It may be used, in many cases of inflammation, where opium itself would be obviously mischievous. In dysentery and the bowel complaints of children it is often an indispensable remedy. It induces sleep, eases pain, and promotes sweat.

DRAGON ROOT—Indian Turnip.—This plant is found in swamps and wet places. The leaves are covered with black

spots and often with white streaks. It appears early in the spring. The flower is succeeded by a round, red berry, which is exceedingly hot and biting. The root, which resembles a small turnip, possesses the same acrid properties. On becoming dry, the root almost entirely loses its strength. In chronic rheumatism, asthma, catarrh, and ulcerous sore throat, the powdered fresh root, in a dose of ten to twenty grains, taken in syrup, every two or three hours, has been often effectual.

DROPSY. — This disease discovers itself at first, by a uniform swelling or thickening of the skin, when it commences in the surface of the body; and in a distention of the abdomen, chest, or uterus, when it commences in these organs. The general dropsy commonly begins in the feet and legs, and gradually extends upwards to the thighs, belly, and chest. A dropsical swelling reaches uniformly round the ankle or leg, and is much more perceptible at night, after standing or walking all day, than in the morning. The swelling, in the commencement of it, will generally subside during the night, and reappear during the next day. Dropsical feet and legs will feel, to another person, colder than natural, and if the fingers are pressed upon the swelled parts, distinct prints of them will remain for some time in the skin; when hard-pressed with the thumb, a deep pit will be sunk in the flesh. As the disease progresses upwards, the legs become so distended as to have a shining appearance, and finally crack open and let the water out. While the disease is confined to the feet and legs, there will not commonly be much fever and general disorder of the system; but after it has reached the abdomen, there will be more or less thirst, dryness of the skin, want of appetite, restlessness, loss of sleep, shortness of breath, scantiness of urine, and costiveness. The face itself will, in this state, indicate the nature of the disease. The lips are commonly deadly pale, as well as the cheeks and whites of the eyes.

In a general dropsy of the surface of the body, which is called anasarca, although there is much swelling, there is no soreness; there is merely a feeling of stiffness and heaviness.

Dropsy of the chest and of the heart discover themselves by an intermission of the pulse, a shortness of breath, particularly in ascending a pair of stairs or a hill; anxiety about the region of the heart, and a paleness of the face and skin. A sense of suffocation will often seize the subject of it on first going to sleep at night, so as to oblige him to rise up immediately in bed. When the disease has become confirmed there is a constant panting for breath. A fluctuation of the water in the chest can often be heard, by placing the ear upon the breast, when the patient turns from one side to the other. By the stethoscope, the presence of water in the chest or heart-case can be easily detected; the fluctuating sound becomes distinctly audible from the pulsation of the heart, and the motion of the lungs in breathing. A numbness of one or both arms is a very common symptom in the dropsy of the chest. A dropsy of the chest will, in some instances, exist alone, and, in

others, in company with other parts of the body, or it will constitute a part of a general disease.

The dropsy of the abdomen, —ascites,—discovers itself by a sense of distention and of weight in that cavity, the weight being felt most on that side on which the patient lies. Where the accumulation of water has become considerable in the cavity of the belly, the breathing becomes short and difficult, and the swelling becomes uniform over the whole abdomen.

The fluctuation of the water can be felt, and, in some instances distinctly heard when the patient moves. The fluctuation of the water will readily distinguish it from pregnancy and tympanites. The water, in this kind of dropsy, is usually contained between the bowels and the walls of the abdomen; but, in some instances, it is contained between the lining of the cavity and the internal muscles of the abdomen.

Dropsy is, for the most part, the effect of other diseases. It is the sequel of profuse bleeding from the lungs, nose, uterus, and bowels. It succeeds to rheumatism, gout, diseases of the liver, fever and ague, inflammation of the brain, dysentery, and all diseases which greatly debilitate the system. It arises from pressure upon the blood-vessels, as in pregnancy, aneurisms, and tumors. It is especially produced by intemperance in drinking. Drunkenness produces the dropsy oftener than any other cause. Ossification of the valves of the heart will produce a dropsy of that organ, and eventually of the whole chest. The bowel complaint of children will produce a dropsy of the brain. The scarlet fever will produce a dropsy in any part of the body. There is a peculiar kind of dropsy which consists of little bladders of water, resembling turtle's eggs, called hydatids. The seat of this disease is commonly in the uterus, but, sometimes, in other parts of the body. The dropsy is supposed to be produced by living in low, damp situations, and by poor, damaged food. It is very probable that most dropsies arise from some derangement of the digestive organs, and of the chylipoietic system, or of that system of vessels which form the blood.

Domestic Remedies.—Temperance and exercise are of the greatest importance in the prevention and cure of this disease. Labor is exceedingly beneficial to dropsy in its early stages. Nothing contributes so much to a free and lively circulation of the blood as exercise. It assists the vital powers, both in moving the blood and in hastening the secretions and the excretions. The perspiration, especially, is always increased by it, and the increase of the perspiration diminishes the accumulation of water in the dropsical part. Friction or rubbing the dropsical part, or the whole body, quickens the circulation of the blood and the absorption of the water.

The effect of temperance, or the due regulation of the quantity and quality of the food and drink, will assist as much in the cure of dropsy as exercise. The food should be light and nourishing, and the drink nothing but water and common tea, or such medi-

cated drinks as are known to be favorable to the disease. The cream of tartar water, lemonade, the Rochelle powders, the soda powders, and the spirits of mindererus, or acetate of ammonia, are all favorable to the disease, and have a tendency to cure it.

The medicines most effectual in the cure of dropsy are purgatives and diuretics, or those substances which increase the flow of the urine. The cream of tartar, in a dose of a table-spoonful mixed with water, should be taken every day. Small doses of the cream of tartar have but little effect. If, on a proper trial of the cream of tartar, the dropsical swelling does not diminish, or diminishes but slowly, two table-spoonfuls of Epsom salts should be taken every day, or enough to operate upon the bowels three or four times very thoroughly. We have always observed that the salts carried off more watery matter from the bowels than any other purgative. Purgatives more drastic than salts are often used, such as scammony, gamboge, and colocynth. Lee's pills comprise one or more of these articles, and will be found sufficiently powerful. The efficacy of purgatives will depend upon the constancy with which they are used. If used in small doses, and at long intervals, they will have but little effect.

We once saw a general dropsy, where the whole body appeared to be filled with water, completely reduced in the course of three or four days by the coming on of a diarrhœa. It was summer time, when the bowel complaints were common; and noticing the effect which it had upon the disease, we let it run on until it had carried off all the water. The person, a woman, from an unusually large size, was suddenly reduced to her natural size, which was rather small. Her acquaintances looked upon her with wonder, and were puzzled to tell the cause of the alteration. The diarrhœa was not very severe, although it amounted to eight or ten discharges in twenty-four hours. We learned from this fact, that unless the bowels were operated upon in a similar way, or to a similar degree, by art or medicine, the dropsy will not be much benefited.

This woman lived for more than a year afterwards, and for the first part of the time she was comparatively free from the disease; but she afterwards filled up with water and died; but her life was evidently procrastinated for more than a year, as she could not have lived in the state she was in previous to the diarrhœa, but a few weeks. The diarrhœa had no necessary connection with the disease, but was an accident which happened to her, in common with many others, at that season of the year. At any other season of the year she would have escaped the accident, but would have died very soon of the dropsy. This case fully convinced us that dropsy in its worst stages can be reduced by purgatives, if they are pushed to a proper extent. We must produce an artificial diarrhœa, or they will prove of but little service.

The dropsy of the brain, which is, for the most part, confined to children under twelve years of age, should be treated, in the

main, like the dropsy of any other part. In this disease, however, which is commonly marked by a squinting of one or both eyes, paleness of the face, stupor, great sensibility to light, nausea and vomiting, costiveness, intense pain in the head, and fever, blistering the head is of the highest importance. The head should be shaved, and large blisters should be drawn upon it and kept running by the savin ointment. The bowels should be operated upon by calomel and jalap; and where the head is hot, and the fever high, leeches should be applied to the forehead and temples. If the disease arises from the ravages of other diseases, as the scarlet fever, and the bowel complaint, neither leeching nor severe purging will be proper, but the disease must be treated with medicines which will strengthen the system and promote absorption.

Dropsical people will do well, if it is in their power, to visit the Saratoga springs, and try the effect of the Congress water. Both water which contains salts and that which contains iron will often prove beneficial. Perhaps there is no way in which a dropsical person is more likely to be benefited than by a residence at these springs. The Sulphur springs of Virginia should also be tried. Large quantities of water, drank frequently, operate very much upon the kidneys, increase the flow of the urine, and give new activity to these important glands.

Professional Remedies.—It is not often that blood-letting is necessary in the dropsy, whether it be general or local. In some cases, where there are evident signs of an inflammatory action, the abstraction of blood, either by leeching or opening a vein, will be demanded. Large and frequent doses of salts, cream of tartar, and other purgatives which drain the bowels of water, are the primary remedies. The calcined magnesia operates both upon the kidneys, by its alkaline qualities, and upon the bowels, and should always receive a trial where other things fail; it is one of the very best medicines in the dropsy. The iodine of potash, in doses of five or six grains, once in three or four hours, has lately been highly recommended as a great promoter of absorption. The sweet spirits of nitre and the tincture of foxglove are often found serviceable in increasing the secretion by the kidneys. The sal nitre is, however, the surest, and, probably, the best diuretic which is at present known.

The water must be drawn off by scarifying or tapping, where other means fail. A few punctures made with the lancet upon the calves of the legs, or other parts of the surface of the body, will often let off the water in a few hours or a few days. Tapping is practised where the abdomen or chest is filled with water. The water will sometimes run off by drawing a blister upon the dropsical part, but the effect of a blister is apt to leave a sore which is difficult to heal.

DROWNED PERSONS, OR SUSPENDED ANIMATION.—In drowning, as soon as the breath is stopped by the water, or rather by the exclusion of the air, the skin becomes of a purple

color, especially in the neck, face, and lips. Some persons are much longer in drowning than others. Whether this is owing to the possession of more vitality by some than others, or to accidental circumstances, is not easy to determine; the same is true of those who die by strangulation, or the breathing of carbonic acid and other deadly gases.

The first thing to be done, on taking persons out of the water, is to carry them carefully to some place where the wet clothes can be taken off, and a suitable degree of warmth supplied. In carrying them, the head and face should lie downward, and a little lower than the rest of the body, that the water may run out of the mouth and throat.

As soon as it can be done, some assistant should get behind the drowned person, raise him up, and, supporting him by the shoulder, should press the belly gently, but firmly, with both hands, which will expel the air and water from the lungs; by removing the hands, the midriff will fall, and air be drawn in. The hands should be pressed and relaxed in this way for some time, by which an artificial breathing is produced; as it is chiefly by the contraction and expansion of the muscles of the belly that respiration is carried on. Any person can demonstrate this fact upon himself, by pressing and relaxing the hands upon the abdomen.

At the same time, a degree of warmth, equal to blood heat, should be applied to the whole body by means of dry, heated blankets; the body first being wiped perfectly dry. Warmth is the prime agent in restoring the vital principle. Warm bricks should be placed to the feet, and flannels, as warm as they can be borne, to the pit of the stomach. An injection of warm milk, with a little rum or brandy in it, should be given as soon as possible. While these things are doing, some one must try to inflate the lungs by blowing air into one of the nostrils, either with the mouth or a pair of bellows. To do this, the other nostril and the mouth must be perfectly closed, and great care must be taken not to use much force. An inflating bellows has been invented, and is getting into use, so constructed as to throw air into the lungs by one motion, and, by another, to exhaust them, in imitation of the vital process: where this instrument can be obtained, it will be found a valuable auxiliary in restoring animation. The room should be warm, but fresh air must be freely admitted. Gentle rubbing with the warm hands or soft flannel will be of some service, but all forcible friction will be injurious. On the failure of these means, the warm bath should be tried. Galvanism is highly recommended.

It is the common opinion that the lungs, in the case of drowning, are full of water; but this is an error. It is seldom that much water ever enters the lungs, unless the person is entirely dead. The contact of the water closes the epiglottis and prevents both the air and water from entering the windpipe. This consideration will be sufficient to deter people from using improper efforts

to expel the water from the lungs, such as rolling drowned persons upon a barrel, or hanging them up by the heels.

Efforts to recover drowned persons, and people strangled by hanging, or suffocated by gases, should not be relinquished until the lapse of several hours, for life sometimes returns after animation has been suspended a long while. After breathing takes place, it will be some time before the senses entirely return.

In cases of suicide by hanging, or suffocation by the carbonic acid and other deadly gases, the same means are to be used. In strangulation and suffocation, however, blood-letting is sometimes practised in a moderate degree, whereas, in drowning, it is deemed improper.

Dissections of those who die by drowning show that the lungs are in a state of collapse, and that there is an accumulation of blood in the heart and the large vein which leads to it.

DRY BELLY-ACHE.—*Colica Pictonum*.—See *Colic*.

DRY ROT.—See *Mortification*.

DUCT.—All the arteries and veins are but so many ducts to circulate the blood. The word duct, however, commonly signifies, in anatomy, a vessel which empties or transfers some of the secretions, or the excretions, such as the bile, the chyle, the pancreatic juice, and the tears. The vessel which empties the bile into the intestines is called the bile duct; and the vessel which transfers the chyle into the left subclavian vein is called the thoracic duct.

DUCTUS COMMUNIS CHOLEDOCHUS.—The common biliary duct, which conveys both the bile of the gall-bladder and of the liver into the duodenum or first portion of the bowels.

DUMBNESS.—The deaf-dumbness is, in general, incapable of cure, although there are a few instances recorded of a complete restoration, both to the hearing and the power of speech. Dr. Good relates the case of a man, by the name of Frazer, who was born dumb, and continued dumb until he was seventeen years of age, but, in consequence of a brain fever, was fortunately restored to hearing and the power of speech. The deaf-dumb person has no other resource but to learn the art of communication by signs.

People sometimes become mute from disease or weakness of the vocal muscles. The scarlet fever has been known to produce dumbness. The organs of the voice will sometimes become paralyzed, by which the power of articulation will be lost. The power of speech has been lost from sudden and overwhelming affections of the mind, such as terror, anger, and grief. Convulsion fits, and heavy blows upon the stomach, will destroy the power of speech. The tongue is sometimes so confined, by the growth of the frenum or bridle, that the person will become almost mute. This last affection is, however, very easily remedied by the severance of the string or little membrane which confines the organ.

Where the loss of the voice proceeds from an affection of the nerves, or from a debility of the vocal organs, the usual remedies

are blisters, emetics, and electricity. Sudden fits of passion have not only destroyed the power of speech, and rendered the person mute, but restored the voice where it has been lost. The same agent which produces disease will very often cure it.

DUODENUM. — This is the first portion of the intestines, or bowels, and is only about a foot in length. The bile and the pancreatic juice are both emptied into this portion of the bowels, by means of two ducts. From the stomach, the food and drink pass into the duodenum and mix with the bile and pancreatic juice. It must be recollected that the bowels are one continuous tube, and that the names, duodenum, jejunum, ileum, colon, and rectum, are only given to successive portions of it, from certain differences in its structure.

DYSENTERY. — The dysentery is a disorder of the function and of the inner structure of the bowels. It begins with a griping pain in the belly and an incessant desire to void the alimentary contents. In general, little is voided at a time, and there is a constant feeling of a constriction or a bound state of the bowels, which is commonly called tenesmus. The matter which is discharged is chiefly composed of mucus mixed with blood. The natural fæces are small in quantity, and formed into round, compact balls, or irregular hardened lumps. The griping pain will continue to increase for several days, even where the disease is mild and recoverable, and the alimentary discharges will consist mostly of blood in some, and in others mainly of mucus. Where the disease lasts for any length of time, the contents of the bowels will discover a mixture of green bile, mucus, blood, and the natural feculent matter. In some instances the smell is intensely bad, and in others there will be hardly any at all, especially where the discharges consist mainly of blood.

There is usually a considerable soreness in the lower part of the abdomen, and some uneasiness in the lower part of the back. Sickness and vomiting are also very common attendants of the disorder; it will often begin with sickness at the stomach and shivering. There is a loss of appetite, thirst, a furred tongue, an unusual heat, and a hard, quick pulse. The pulse, however, does not commonly show that degree of size and force as in some other inflammatory disorders. The fever is much more inflammatory in some cases than in others. The disease will sometimes be so mild, and so short in its duration, as scarcely to force a person to lie by for a day. In other instances it will be protracted for two or three weeks, and even for months. It, like many other diseases, becomes chronic and peculiarly ungovernable. The dysentery will sometimes change into a diarrhœa, or a state of the digestive organs wherein the food is passed through them unchanged. It ceases spontaneously in many cases, and the natural function of the bowels is entirely re-established in the course of a few days.

The dysentery is an inflammation of the inner coat, or mucous membrane, of the bowels, and, in most cases, of the lower portion

of the bowels, or the large intestines. The muscular or fibrous coat, and the peritoneal coat, which together constitute the outer side of the alimentary canal, are never involved in the inflammation. The inflammation of the inner coat of the intestines resembles very much the inflammation of the mucous membrane of the nose and windpipe in an influenza or bad cold. In both cases, the inflammation appears to be confined to the mucous membrane itself, and does not extend any deeper. In case of the inflammation of all the coats of the intestines, it will produce a complete stoppage, and destroy the peristaltic action of the part; but in a dysentery, the inflammation being more superficial, it only produces a bound state, or partial stoppages, of different portions of the inflamed intestines. The pain, in a dysentery, appears to be mainly produced by the peristaltic motion of the bowels, for when this motion is stopped by opiates there is no pain felt. The intermission of the pain, and its occurring just before each evacuation, also show it to result from the action of the bowels. Were there no more motion, therefore, in a dysentery, than in the mucous membrane of the nose, windpipe, and bronchia, in the influenza, there would probably be no more pain. The friction and weight of the contents of the intestines, moving through the inflamed tube, also have some agency in the production of the pain. When the hardened balls of natural fæces are removed from the inflamed canal, there is always a remission of the griping, the pain, and the sense of constriction.

In the dysentery, purulent matter will sometimes be voided; but this is not so alarming a symptom as it might at first seem to be. The phenomenon will often happen in recoverable cases. We have several times seen it occur, where the disease has run for some time, in people who have recovered entirely from the disease. The formation of this purulent matter in the intestines does not always portend an ulceration; the mucous membranes will all secrete pus under certain circumstances.

The intestinal discharges will often present the appearance of water in which raw flesh has been washed. The appearance of particles of flesh, floating in the watery discharges, is only congealed, clotted blood, broken into small fragments. Ulceration of the intestines is a rare occurrence, although, in chronic cases, it is sometimes seen.

When the fever, in this disease, is highly inflammatory, the patient will often be carried off in a very few days; and, in some instances, where the fever is comparatively mild, the disease will run on for some weeks, or even months. Relapses are very common. No pains should be spared to prevent this occurrence.

The dysentery is the most common in summer and fall, and the hotter these seasons are, the more productive they are of the disease. The most usual causes of the dysentery are the changes from heat to cold, which suddenly check perspiration and repel the blood from the surface. In hot climates, the disease is more prevalent than in cool ones; and very dry, hot weather is more

productive of the disease, than moist hot weather. The disease is sometimes epidemic, and is more prevalent in some districts, in the same latitude, than in others. Limestone districts have been pointed out as being more productive of the disease than other kinds of soil. On this account, it has been called endemic, or peculiar to certain places. All green, unripe vegetables and fruit will produce the disease, when eaten in sufficient quantity. Lobsters and many kinds of fish also occasion it. All substances difficult of digestion have a tendency to induce it. The dysentery was formerly thought to be contagious, but modern physicians have become satisfied that it is not so. Dr. Dewees, of Philadelphia, has never seen a case where the disease has arisen from contagion; and other physicians of eminence have testified to the same fact. It is barely possible that the disease, in camps and hospitals, may become contagious; but, in general, like the cholera morbus and diarrhœa, it is produced by the changes of the weather, by the season of the year, and by the food and manner of living. It is probable that the season of the year and the nature of the soil induce a state of the system which easily runs into this disease, on the presentation of any of the occasional causes which produce the other diseases of the bowels.

Domestic Remedies.—In mild cases of the dysentery, where there is not much fever, thirst, nor pain, a table-spoonful of castor-oil and two tea-spoonfuls of paregoric, mixed, taken once a day, will be all the medicine actually required. No solid food ought to be eaten in a dysentery, and the drink should be flax-seed tea, or some other mucilaginous liquid, and cold water. Brandy is sometimes taken in this disease, but it is not a good thing to use in the commencement of the disease. Where castor-oil is not at hand, five or six butternut pills, or as many pills made of the extract of thoroughwort, may be taken to move the bowels. If the pain is not allayed by the paregoric, two tea-spoonfuls more should be taken again, at the end of four hours. A dose of the Rochelle salts, or magnesia, will sometimes be found to answer better than the oil; and thirty or forty drops of laudanum to be more effectual than the paregoric. Where the paregoric and laudanum do not procure relief from pain, a tea-spoonful of laudanum may be given by injection in a wine-glassful of flax-seed tea, or the same amount of starch. The quantity of flax-seed tea, or starch, should always be small, lest the bowels should be disturbed by the mere bulk and weight of it. At the same time these medicines are used, the feet should be soaked in hot water, and plentiful draughts of quite warm flax-seed tea, or catmint, or balm tea, should be taken to produce a perspiration. Two grains of ipecac., once in three hours, will be proper, where the hot teas fail to excite a sweat. Thirty drops of the wine of antimony, once in three hours, will have an effect similar to the ipecac., in raising a moisture upon the skin.

The dysentery of children will generally yield to a mixture of oil and laudanum, or paregoric. To a child a year old a table-

spoonful of castor-oil, mixed with six drops of laudanum, should be given every day until the complaint is cured. This dose of oil may seem large for a child of that age, but experience has confirmed the safety and the utility of it. We have often administered two table-spoonfuls of castor-oil in a day, to a child of that age, with the happiest effect. The object is to allay the pain entirely by the opiate, and to clear the bowels thoroughly with the oil. If the first dose of laudanum will not produce the effect, we administer another similar dose, in the course of eight hours. We greatly prefer the oil to all other purgatives, but other cathartics, also, may be used in place of it, where the oil will not agree with the stomach. Sickness at the stomach is so often an attendant of the dysentery of children, that calomel, in some cases, is almost the only purgative which will be found to stay upon that irritable organ. A dose of five or six grains of calomel, mixed with six drops of laudanum, will both allay the pain and evacuate the bowels. It must be remembered that physic of all kinds is much longer in operating, when given with laudanum or other opiates, than when taken alone. A dose of oil or other physic will often be two or three times as long in operating, when the system is under the influence of opium, as it will when no such medicine has been given in conjunction with it. It will sometimes be found, in the dysentery of children, that neither oil, nor any other pure cathartic, will answer the purpose in subduing the disease. In such cases a grain or two of ipecac., given once in three or four hours, will often both relieve the pain and evacuate the bowels. We have often seen ipecac., given in this way, without the use of any opiate, cure the dysentery of children when all other means have failed. Three grains of the Dover's powder given morning and evening to a child a year old, with five grains of calomel, will occasionally be found more suitable than laudanum or paregoric. Where the children are younger or older than one year, the dose must be diminished or increased in proportion to their age. To a child six months old, four drops of laudanum will be a full dose; and to one two or three years old, ten drops are a proper dose. To children who are older than three years, two drops for every year may be added. The same doses of cathartic medicine will, in general, answer for all children between one year and eight years of age. We have often given a child six months old a table-spoonful of castor-oil at a dose; but when they are younger than this, a dessert-spoonful, or a tea-spoonful, will be enough. Sometimes an emetic of ipecac. will have a wonderful tendency, if given early in the disease, to resolve the inflammatory action of the bowels; but, in general, this medicine does better in small doses. A blister upon the bowels, where there is not much fever, is often very serviceable. Fomentation, by the use of cloths dipped in hot water, spirits, or infusions of pennyroyal and other stimulating herbs, is almost always beneficial, as it tends to solicit the blood to the surface and to excite perspiration.

The best food for children sick of the dysentery, as well as grown people, is a porridge made of superfine flour. The flour should be boiled much longer than porridge made of Indian meal, and should not be made very thick. Children at the breast should be allowed to nurse, but should not be allowed to suck more than half the usual quantity. Boiled milk and water, in equal parts, may be allowed where the fever is not very high.

Children, as well as grown people, may always be allowed to drink cold water in this disease. We believe it to be the most friendly substance which can be introduced into the stomach and bowels. The soda powders and the Rochelle powders are also well adapted to the nature of the complaint. A gruel, made of arrow-root or of boiled crackers, may be given, both for food and drink.

Professional Remedies.—The pulse, in the dysentery, is not always a sufficient index of the degree of inflammation and of the extent of mischief in the bowels. The pulse will sometimes be full and forcible when there is not a very high degree of inflammation, and there will often be a very high degree of inflammation when the pulse is rather small, contracted, and not very forcible. We believe, in this disease, the pulse in almost all cases is hard, although it may be small and contracted. The discharges from the bowels, and the degree of pain and sense of constriction, will often show, also, a great degree of disorder of the bowels, when the pulse is neither very full nor forcible. Therefore, to judge properly of the degree and extent of the inflammation, we must take into the account the height of the fever, the severity of the pain, and the appearance of the discharges, as well as the condition of the pulse. If the fever be high, and the pain and the constriction great, and the appearance of the discharges angry, slimy, and bloody, blood-letting will be necessary. This, however, should always be performed pretty early in the disease. If the first bleeding does not subdue the severity of the symptoms, a second should be resorted to, either by leeching or by opening a vein. Where leeches can be obtained in sufficient quantity, they are to be preferred to opening a vein. A dozen and a half of leeches will produce about the same effect as a pint of blood drawn from the arm. The application of half a dozen leeches or so at a time is a mere ceremony, productive of little or no effect. Dr. Dewees, in this disease, places the greatest reliance upon blood-letting. In children, leeching is much the best form of abstracting blood, and is worthy of more attention than it has hitherto received.

The combination of opiates with purgatives is the best mode of operating upon the diseased bowels. The opium prevents the diseased action and removes the pain, while the purgative relieves the oppressed surface of the intestines. An ounce of castor-oil and a grain and a half of opium, or forty drops of laudanum, mixed, in a severe case of dysentery, is none too large a dose. This dose should be given twice or three times in the course of twenty-four hours, if the bowels are not sufficiently emptied and the pain allayed by

the first or second dose. A grain and a half of solid opium in pill, or forty drops of laudanum, may be given to a grown person with perfect safety once in eight hours.

The pure opium or laudanum is much better than the denarcotized opium or morphine, as the two latter are deprived of a portion of the very property which is beneficial in this disease. A quarter of a grain of tartar emetic, dissolved in water and given every hour, will often empty the bowels more easily and safely than any other cathartic. Thirty drops of the wine of antimony will have the same effect. Two grains of the powder of ipecac., every two hours, will often succeed in procuring relief where other means fail. Both the antimony and the ipecac., in small doses, are, in our opinion, among the best remedies in the dysentery. But castor-oil and laudanum, or pure opium, is our standing remedy. Bleeding, blisters, and fomentations are often required, but purgatives and opiates can seldom, if ever, be dispensed with. Fomentations can always be used with safety, and are generally beneficial. Opiates will not always agree with the constitution of the person or the degree of inflammation present, and in such cases, gentle purgatives, emetics, sudorifics, and demulcent drinks, must be used. Next to castor-oil, the purgatives most proper in the disease are calomel, calcined magnesia, salts and manna, Rochelle powders, elixir salutaris, butternut pills, thoroughwort pills, jalap, and cream of tartar. Rhubarb is a doubtful remedy; it is apt to increase the griping and sense of constriction.

The Dover's powder, in some cases, may be preferable to laudanum or opium, especially where the latter does not produce a perspiration. Injections are often useful, but are not, in general, productive of anything more than temporary relief.

The diet should consist of flour gruel, rice-water, barley gruel, or boiled milk and water. A flannel shirt should be worn next to the skin, and the greatest care should be taken to guard against a relapse, which is very common in this disease. An indulgence in eating too soon, or too early an exposure to the weather and to the excitement of the mind, has often proved fatal.

The room where a patient is sick with the dysentery it will often be necessary to ventilate, and to correct the contaminated air by the chlorides of soda and of lime, or some other agent. In malignant cases of this disease, where the strength and vital powers are prostrated, stimulants and tonics must be freely used. Brandy, wine, camphor, and quinine must be given, as in other diseases of debility. If the dysentery is complicated with the intermittent fever, the fever must be treated with the quinine, and the local disease combated with moderate doses of opium, demulcents, and gentle purgatives. In this complication, emetics will often be found compatible both with the fever and the dysentery.

A great loss of strength, a fetid smell, tense abdomen, cold extremities, hiccough, and purple spots upon the skin, with an irregular, intermitting pulse, foretell an unfavorable termination. But a gradual subsidence of the pain, and the desire to go to stool, a gentle

perspiration, a moistening of the tongue, and the return of sleep, are favorable symptoms and foretell a speedy recovery.

DYSMENORRHEA — Difficult Menstruation. — See *Difficult Menstruation* and *Green Sickness*.

DYSPNŒA — Difficult Breathing. — It is not a disease of itself, but a symptom of other affections, such as asthma, dropsy of the chest, consumption, peripneumony, corpulence, influenza, and angina pectoris. The remedies employed in these diseases are adapted to the relief of the difficult breathing.

DYSPEPSIA OR INDIGESTION. — The appearance of the inside of the stomachs of those who have died of dyspepsia shows that the disease is situated for the most part in the lower part of the organ. The valve of the stomach, or the aperture which opens into the intestines, is commonly found either very much contracted, ulcerated, or in a scirrhus state, having a hard, insensible tumor surrounding it. In most cases there is no doubt but the dyspepsia is a slow, sub-acute inflammation, — such as exists in the windpipe and throat in a chronic catarrh, — not severe enough to create a general disturbance of the system, but sufficient to derange the natural office of the stomach. This species of inflammation is distinctly seen in what are called weak eyes, when there is some redness, produced by the fulness of the blood-vessels, — a tenderness hardly amounting to soreness, — a little thickening of the eyelids, and either a state of dryness, or a secretion of mucus which often glues the eyelids together. In a word, the eye is diseased, but not enough to destroy its office. Any over-action is sure to increase the affection. So with the stomach in dyspepsia; there is a certain degree of inflammation, circumscribed in its nature, involving not the whole of the stomach alike, but inhabiting a portion only. We are inclined to think that the great majority of diseases, if not all, may be resolvable into different degrees of inflammation. Who can doubt, for instance, that the croup is only a higher degree of inflammation than the influenza, or that the dysentery is only a lower degree of inflammation than enteritis, or that the diarrhœa is a still lower grade of inflammation than the dysentery? Here croup, influenza, dysentery, and diarrhœa are only different names for different degrees of inflammation, and the same is probably the case with the great majority of diseases. But the work is no less difficult and arduous to graduate remedies to the different degrees of inflammation, than if each degree were a distinct entity.

Writers upon dyspepsia have almost uniformly confounded a disease of the nervous system with dyspepsia. The two diseases are just as distinct as the function and structure of the brain and nerves are distinct from the function and structure of the stomach. A disease of the nervous system disorders the function of every other organ, and the stomach in common with the rest; but the dyspepsia is not sure to disorder the nervous system, at least to that degree that the nervous system is disordered by the excess of its own action, or by the causes which act particularly upon that system. The nervous system is always long disordered before the stomach

is involved, and the stomach is long disordered with the dyspepsia before the nervous system is permanently affected. By ascertaining which disease commenced first, and the causes which were engaged in producing it, we may come to a pretty accurate conclusion with respect to the real seat of the disease.

We believe the feelings and sensations of patients are always a pretty good index to the seat of disorders in general, and may be relied upon in relation to the seat of dyspepsia, and disease of the nervous system. If the patient constantly and uniformly points to the stomach as the seat of his disease and the source of his distress, we have good reason to conclude that it is that organ which is diseased. If, on the contrary, he uniformly points to the feelings of his head and the affections of the nerves as the cause of his distress and misery, we have as good reason to conclude that it is the brain and nerves which are the source of the disease. It is, indeed, no very difficult matter to determine whether the seat of thought and feeling, or the seat of digestion, is the diseased part. Painful thoughts and feelings may easily be distinguished from a pain in the stomach.

The disorder of the nervous system is, we believe, universally attended with a state of fearfulness and timidity, a wakefulness either constant or periodical, and a multitude of inconsistent and absurd fancies, false ideas, and groundless apprehensions, which are never witnessed in a true case of dyspepsia or chronic derangement of the stomach.

Dyspepsia commences with a distressing feeling of a load upon the stomach after eating; pain, which is relieved, by belching up wind; heart-burn and sour eructations; a bound belly and sudden distentions of the bowels. This state of things will often continue for weeks and months before there is much loss of appetite or loss of the flesh. But sooner or later the appetite becomes variable or lost; the eyes look hollow; the skin pale, dingy, or sallow; the person becomes thin; the voice becomes hollow and feeble, and the spirits dejected. At intervals the appetite becomes voracious, and the spirits good; but this does not last long. A single fit of indigestion brings on another series of the same symptoms. The person now begins to grow particular about what he eats, and the amount of food which he takes at a time. If he eats the usual amount of food to which he has been accustomed, he is sure to experience several hours' distress from it, or to throw it up. He feels a constant squeamishness at the stomach, and sometimes he experiences sickness and vomiting. The feet and hands are commonly cold, and the body grows more sensible to the changes of the weather. Sometimes the person is thrown into a cold sweat, and experiences a degree of faintness, swimming of the head, and a loss of sight, especially if he stoops over, with his head down. The tongue in the morning is covered with a sticky, slimy coat; the breath emits a filthy odor; and the bowels are dry and costive. The bowels will often feel as if bound with a cord, and the stools, instead of being once a day, as they should be, are not oftener than

every two or three days, and then they are dry, hard, and small in volume. Frequently they will be mere dry chips of fecal matter, apparently devoid of mucus and deficient in bile. In this state the person never feels easy and cheerful. Every meal is attended with more or less distress in the stomach and bowels. The predominant feeling is a sense of weight at the pit of the stomach and a pressure of wind in the bowels. The person sometimes flies to the use of tobacco or ardent spirits; but from this he only experiences a temporary truce from his distress, and an aggravation of his disorder. If he has been a great eater from habit, and still retains an appetite, he finds abstinence from food intolerable, and, driven by habit, he foolishly prefers to gratify his appetite at the expense of health; for he might as well think of travelling upon a broken leg as of digesting his usual amount of food when, the digestive organ is deranged. It is no less the dictate of common sense and of reason, than of science, to allow the organ which is sore and inflamed to rest as much as possible.

The liver is apt to be very much affected in the dyspepsia. Sometimes a larger quantity of bile is secreted than ordinary, and, the bowels being costive, the bile flows up into the stomach. The bile duct, which carries the bile into the intestines, is not more than five or six inches below the lower orifice of the stomach, which accounts for the easiness of the ascent of the bile into the stomach when the intestines below are bound. Any considerable quantity of bile in the stomach is sure to create nausea, sickness, and pain. The natural juice of the stomach seems to have the effect of coagulating the bile into lumps, or a kind of green curd, which in this state is often thrown up. It sometimes turns the bile black and granulous, like the appearance of coffee-grounds, and at others, green.

The bile is exceedingly healthful to the bowels when it is secreted in due quantity, although it is hurtful to the stomach. Without the bile, the bowels are torpid, dry, and contracted. Their motion is invariably retarded whenever there is a deficiency of this fluid. It is easy to see, therefore, how an affection of the liver reacts upon the stomach and the intestines, which compose a part of the digestive powers. The disease of the stomach is probably continued to the liver, although, in many instances of dyspepsia; the liver is scarcely affected.

The affection of the nervous system, which often accompanies the dyspepsia, probably arises from the affection of the nerves of the stomach, which is continued, in a greater or less degree, to the brain, and from the deficiency of nutriment which the brain experiences in consequence of the interruption of the usual amount of nourishment from the disease of the stomach.

The pulse is not apt to be much affected in the dyspepsia until the disease has become permanent and severe. The heat of the body is much less than in health. The skin is, in some instances, dry and contracted, and, in others, moist and clammy. Dyspeptic people, we believe, are not apt to be much more troubled with a

palpitation of the heart than well people. In this respect dyspepsia differs again from a disease of the nerves. The two diseases may, however, exist together, and no doubt often do; in which case a palpitation of the heart may attend dyspepsia.

The muscular strength is very much impaired in dyspepsia, as well as the energy of the mind. Labor, amusement, and study, are very apt to be irksome, and the sleep exceedingly unrefreshing. The wind and the distention of the stomach and bowels keep the sufferer constantly tossing from one side to the other, nearly the whole night long, and afford but little time for rest.

The dyspepsia in some instances ends in an affection of the lungs, cough, and all the symptoms of hectic fever. This termination of the disease always makes it of the highest importance to cure it in its incipient stage, or when it first begins. If taken in season, and properly treated, the dyspepsia is as curable a disease as any there is; but if suffered to go on with little or no attention, and without any alteration of the manner of living, or avoidance of the causes which produce it, there is no disease more intractable.

The stomach may be considered as the root of the tree. It is to this organ that the nourishment is first applied, and here it is converted into a soft state, preparatory to its conversion into blood. But the process of digestion is not finished in the stomach. After the food is dissolved by the gastric juice, it passes into the first portion of the bowels, called the duodenum, which is about a foot in length, and where it meets the bile and the pancreatic juice. Here it receives a whitish color, and is called chyle, and is ready to be secreted by the lacteal vessels, which are situated all along the small intestines until their termination in the colon. Any disorder of this apparatus is precisely like a disorder of the root of a tree. The tree can never flourish and grow while there is any interruption of its nourishment from a disease of its root. From the great variety and consistence of the food which people eat, the hasty manner in which it is often swallowed, and the surprising quantity sometimes thrown into that small organ, we might expect disease of the stomach much oftener than we witness it. The stomach is certainly a very tough, strong organ, or it would inevitably be diseased much oftener than it is, by the multiplicity of acid, alkaline, metallic, saline, fibrous, corrosive, stimulating, sweet, bitter, rancid, putrefactive, oily, solid, gristly, and bony substances which are daily poured into it. But although it will resist abuse and oppression to a great extent, without injury, it must ultimately be overcome in the contest; and when once overcome, its lameness is apt to last for some time, and to produce more or less disorder of the whole system.

People between thirty and forty years of age are the most liable to dyspepsia, although it will sometimes appear earlier or later in life.

The most common cause of the dyspepsia is excess in eating and drinking and the want of exercise. Other causes assist in the pro-

duction of it, such as great anxiety and perplexity of mind, and the loss or frequent interruption of the regular sleep. Nothing sooner disturbs digestion than the loss of sleep. The habitual use of ardent spirits, opium, tobacco, tea, coffee; excessive study, exhaustion from heat, cold, and venery; diseases of the liver, spleen, and nerves; all conspire with the over-action of the stomach to produce the disease. The stomach is often affected with a scirrhus at its lower orifice; this gives rise to the worst form of dyspepsia, but whether the scirrhus is always avoidable, by any course of living and conduct which we can adopt, is exceedingly doubtful. A disposition to it is, in many instances, hereditary. Temperance, exercise, and regular habits of sleep, are, beyond a doubt, the best means of obviating such a disposition.

People in cities, whose minds are distracted with a multitude of business, and who are forced to great irregularity in sleep and eating, are peculiarly liable to dyspepsia. Farmers, and their wives and children, who live in the country, who labor daily, never hurry, sleep sound at night, and eat wholesome articles of food, and much fewer in number than those who live in cities, who drink cold water, or the weakest dishes of tea and coffee, are seldom affected with it. In the country, milk is the drink of children, instead of tea and coffee, which no doubt contributes greatly to strengthen and fortify the stomach against disease. The dyspepsia sometimes makes its appearance among country people, but the disease is rare in comparison with the instances of its occurrence among the inhabitants of cities. Seafaring men are also peculiarly exempt from dyspepsia. There, again, we see the effects of great simplicity of living, united with exercise, good air, and a comparative freedom from the embarrassing cares of a city life. All active trades are more favorable to the soundness of the stomach than sedentary employments. The fewer the articles of food which we eat, and the greater the uniformity which we observe in eating them, the greater will be our chance of escaping this harassing disease.

Domestic Remedies. — In the beginning of the disease, especially if the symptoms are mild, there is no necessity of taking a great deal of medicine. We have only to alter the quantity, the variety, and the quality of our food; to secure a sufficiency of sleep; to avoid all dissipation; to take a good deal of exercise; to regulate the bowels with some mild purgatives; and to correct the acidity and wind in the stomach with a few alkalies and carminatives. Where sourness of the stomach is annoying, a little crude soda, such as is used to soften the water in washing, dissolved in water, is one of the best things which can be used. A piece of the size of a kidney bean should be dissolved in half a tumbler of water, and drank, at intervals, until the sourness is corrected. The calcined magnesia, or a few spoonfuls of lime-water, where the other things cannot be obtained, or a little chalk, will destroy the sourness. The lye of wood-ashes is also a good corrector of sourness, if the ashes are pure. To expel the wind, spearmint or peppermint tea, drank warm, are good medicines.

If the distress amounts to a wind colic, a tea-spoonful of paregoric, or a few drops of laudanum, or solution of the sulphate of morphine, should be taken. If the distress arises from the quantity or the quality of the food, a dose of salts or an emetic should be given to free the stomach of the offending matter. The person, however, must not go without food, although the quantity must be smaller than usual, and of a kind that will digest easily. Coarse wheat bread is the most suitable of all bread stuffs for a dyspeptic stomach, unless it be rye bread. The rye bread, or the rye flour bread, is more opening than the wheat bread, but less palatable, and rather more liable to ferment. But where the rye bread does not ferment, it is preferable to the wheat. Bread made of wheat flour retards the motion of the bowels and clogs the stomach. Stale bread, or bread a day or two old, is better for the stomach than new bread. The Indian meal bread, baked before the fire, or rye and Indian meal bread, baked in an oven, if it does not turn sour upon the stomach, is much better than wheat flour bread. The soda bread, lately invented, will, in many instances, be found to answer better than either of the other kinds. Sea bread and hard crackers suit many stomachs better than softer bread. But after a fit of indigestion, where the stomach has experienced a contest of wind, pain, heart-burn, and hot, sour eructations, and, perhaps, sickness and vomiting, the patient, for the first twenty-four or forty-eight hours, should take nothing but rye pudding, boiled rice, or soaked wheat or rye bread.

A great quantity of drink, of any kind, is pernicious. The less the gastric juice is diluted, like any other solvent, the greater will be its power of digestion. If a great quantity of tea, water, or other liquid is taken into the stomach, the gastric juice, which was before strong, becomes weakened, and operates upon the solid food but slowly and imperfectly. One gill of the gastric juice is, perhaps, dissolved in, or at least mixed with, a quart of water, by which its solvent power is lost. No more drink should be taken than is necessary to quench the thirst. For this purpose, a porridge made of Indian or coarse wheat meal, milk, and water, commonly called milk porridge, will, in general, be found very suitable.

A dyspeptic person should not eat more than one kind of meat at a time, and of this only a moderate quantity, once a day. Some stomachs will not digest vegetable food so easily as animal food or meat. One kind of vegetable, eaten with the meat, will be as much as the stomach will bear, or ought to bear, and this may be potato, bread, rice, or any other article of easy digestion. We have known instances where nothing but meat could be taken, and other instances where nothing but bread could be digested. Of the meat kind, mutton, beef-steak, and poultry are the most digestible. Eggs and milk, made into custards, are suitable articles of diet for dyspeptic people. Ice creams, eaten slow, and without any other substance at the same time, we believe to be wholesome. Salt fish, eaten either with bread, or mixed with potato, is very innocent; and so is salt pork or beef, eaten one at a time, with one kind of

vegetable. Almost all white fish, which, in general, contain no oil, are light and very easy of digestion.

Many kinds of ripe fruit are agreeable to the stomach in dyspepsia, such as strawberries, whortleberries, blackberries, peaches, but not apples and pears, unless they are cooked. Indeed, all kinds of fruit and vegetables which create wind, and ferment in the stomach and bowels, must be avoided.

There is always more or less wind in the stomach and bowels in a sound state of health. The digestive organs are not, however, sensible to the presence of it, unless they become inflamed or a little sore. When any part becomes sore and inflamed, an ordinary degree of touch, pressure, or stimulation, excites pain. There may not be in the stomach and bowels of a dyspeptic a larger quantity than ordinary of wind or air, but these parts being sore and inflamed, acute pain and severe distress may be produced by it. The stomach and bowels, having lost their ordinary degree of cohesiveness and strength, are probably more dilated and distended by the same quantity of air than they are in a state of health. When the eye becomes sore and inflamed, the same degree of light which only produced agreeable vision is now painful or intolerable.

To endeavor, therefore, to expel the wind in every fit of indigestion, and to produce relief in this way, will be attended with fruitless effects. But whenever there is fermentation in the stomach and bowels, which is indicated by sourness and acrid fumes arising, it will be proper to make use of warming and soothing teas and essences, such as pennyroyal, peppermint, tansy, spearmint, hop, poppy, red pepper, and ginger. The poppy tea is probably the most certain to give permanent relief. The hop, ginger, or red pepper teas stand next in point of strength.

In many instances, a gentle emetic, either of ipecac. or lobelia, will be necessary. If the stomach is loaded, there is no other way to produce immediate relief than by removing the load. This should be followed with a dose of salts, castor-oil, Rochelle powders, aloes, butternut physic, or thoroughwort tea. If there is a constant feeling of soreness, and pain at the pit of the stomach, a large blister should be drawn. Small blisters are of no service. Half a dozen leeches should also be applied to the pit of the stomach every two or three days, until relief is obtained. If there is a constant costiveness of the bowels, the best medicine which we have ever used is aloes, taken every day, at night. One, two, or three aloetic pills, as the case may require, must be taken on going to bed, and continued for four weeks at a time, if the digestive organs are not reinstated before. We have cured many people with no other remedy. In bad cases of dyspepsia, we have often used one part of the oxide of bismuth and two of aloes, made into pills, with a solution of gum arabic, or with molasses. Four of the pills are taken every night until an improvement of the digestion takes place. Such is the efficacy of bismuth and aloes, in this disease, that pills

of these two articles are often sold as a patent medicine and sovereign remedy for the cure of dyspepsia.

The oxide of bismuth can be used alone, in powder, of five grains at a dose. In cases where a daily use of physic is not needed, it will be advisable to use it in this way. The powder may be mixed with honey, molasses, or any kind of preserve or syrup.

Daily exercise, continued until the person is a little tired, is of indispensable use in the cure of the disease. This may be done by some light employment, by which the mind and feelings are not much excited; by walking; riding, either on horseback or in a carriage; a trip to sea; or by fishing, hunting, or searching after plants and minerals. Labor or exercise always creates an appetite or demand for food in a state of health; and, where the strength will admit of it, it will undoubtedly have a similar effect in a diseased state of the stomach. A journey from the seaboard into the country, or from the country to the seaboard, is almost always productive of improvement. The change of air, as well as of scene, is peculiarly invigorating.

There is no disease upon which the sea air has an effect so remarkable as upon this. The dyspeptic hardly reaches one of the beaches upon our northern Atlantic coast, before he begins to crave more food and to digest it better. His sleep is sounder and more refreshing, and his strength is perceptibly improved. There is less wind in his stomach and bowels, or it troubles him less, and his bowels begin to move without the use of medicine. If he bathes daily, in the sea water, he improves still faster. Sea air and sea bathing we should place among the cardinal remedies in the cure of dyspepsia. Both the air and the bathing are, however, unsuitable where there is a cough or any sign of hectic fever.

By increasing the tone and action of the skin, which is a large surface crowded with capillary vessels, the circulation of the blood is hastened, the heart acts with more force, and the vessels which separate the sweat from the blood perform their office with more effect. The application of cold sea water to the skin, where it can be borne, besides removing the scurf deposited by the evaporation of the sweat, which blocks up the mouths of the capillaries, acts as an astringent, and gives a greater degree of cohesiveness to the substance of the skin. In sea bathing, it is always best to begin with a temperature just below the temperature of the body, and to keep lowering it until it is used entirely cold. If we bathe in water of the temperature of ninety degrees, we bathe in cold water, or water which is colder than the body, although it may be warmer than the air. Water carries off heat from the body much faster than the air, so that a person might be seriously injured by bathing in water, when he could withstand the atmosphere of the same temperature with perfect impunity.

Rubbing the skin is of great use. This process arouses the action of the blood-vessels of the skin, awakens its sensibility, and finally

draws to the surface a greater amount of fresh blood. This may be done either with a crash towel, flesh-brush, or by the hands. But if the person is able to take a good deal of general exercise, friction becomes less necessary.

The white mustard is an excellent remedy in many cases of dyspepsia, especially where flatulence and costiveness prevail. A table-spoonful operates upon the bowels, warms the stomach, and produces an expulsion of wind. It should be taken every day for three or four weeks. The common mustard, used as a condiment, will answer nearly the same purpose. Either of them may be taken, in seed or ground. The ground mustard has the most effect, but is less palatable. It may be taken in molasses or any kind of syrup. This article alone has cured and helped very many people.

Thoroughwort, taken every day, in sufficient quantity to move the bowels without violently purging them, has often been found extremely helpful.

The Saratoga water and a residence at the springs have effected many cures. Where taking medicine is a fashion, and where a fountain of it is found ready made by nature, it can be swallowed every day, not only without disgust, but even with a degree of pleasure. Almost everybody is a believer in natural remedies, and perseveres much longer in the use of them than those which are artificially prepared. In chronic diseases, this kind of faith may sometimes be turned to good account, and especially in dyspepsia. The mineral waters which contain iron are extremely suitable to this disease. The Hopkinton springs, in Massachusetts, and the Stafford springs, in Connecticut, are both chalybeate, and have often been found serviceable. The Comstock springs, in our own state, are scarcely inferior to either.

Were we to point out the place which, of all others in our country, is the most suitable for the residence of a person laboring under dyspepsia, we should designate the island of Rhode Island. Its vicinity to the open sea; its high, dry, and delightful situation; the nature of its soil and productions; its abundance of good water, and of good fish; the facility for sea bathing and agreeable excursions; the verdant and picturesque face of the whole island and the adjacent country; the extensive views of the water, and the cooling breezes which are daily wafted from it; the surpassing beauty and coolness of the beach in summer; the freedom of the place from bustle and noise, and its ancient reminiscences, all conspire to render it, not only a place for health, but for recreation. The fact agrees with the opinion which we have given of the place. Multitudes, not only in our own, but in other states, can testify to the benefit which they have derived from a residence or a visit there.

Professional Remedies.—The proper regulation of the diet in this disease is no easy matter. Habit has made some things quite easy of digestion to certain people, which are difficult of digestion in others. To country people, salt meats are quite easy of digestion, while to people in the city, who are in the habit of eating fresh

meats, they are quite indigestible. People who are brought up on milk find it much easier of digestion than those who have been brought up without it.

In general, things which are preserved are very difficult of digestion, and therefore very unsuitable in this disease. Indeed, to preserve a vegetable or animal substance, is about the same thing as to invent a process for rendering it indigestible. A preserve is intended to withstand the action of the elements, that is, the action of heat, air, and moisture, or, in other words, it undergoes a chemical process by which it will keep for a long time. It is, therefore, no less calculated to withstand the action of the gastric juice than that of the air, heat, and moisture. Being preserved against putrefaction, it seems also preserved against digestion. Digestion could not go on in the stomach without heat, air, and moisture; and although digestion and putrefaction are different processes, neither can take place without the action of heat, moisture, and air. To render a substance difficult of putrefaction is to render it in the same degree difficult of digestion. Even salted meats and fish, which from habit are rendered digestible, are much less so, when eaten in the same quantity, than the same substances are when fresh. The stomach, among civilized people, is much more accustomed to salt than to the other articles used in preserving substances from putrefaction, and, therefore, articles preserved by it agree better than those which are preserved by acids, syrups, smoke, dry heat, spirits, and other antiseptics. Sausages, or the meat of sausages, are preserved with pepper, salt, sage, and summer savory, which appear to render it much more indigestible than salt alone. Pickles are much more indigestible than the same articles before the action of the agents which preserve them.

It may be laid down as a rule that meat and vegetables are easier of digestion in a fresh state than in a state of preservation, and that everything which preserves them from putrefaction preserves them against the action of the gastric juice.

In general, vegetable food is much the most suitable in dyspepsia. The quantity and the quality of this kind of food must be regulated by observation and experience. As much of it may always be taken as the stomach will digest without distress, pain, or uneasiness. The columbo root, quassia wood, gentian, and the escaquilla bark, will be found, each in its turn, suitable to many stages of the disease. A tea made of these substances, by an infusion in boiling water, is preferable to a solution of them in alcohol, ardent spirits, or wine. In general, it requires about an hour to extract the virtues of these substances in boiling water. They should not be boiled, but boiling water should be poured upon them, and allowed to stand an hour before the bitter tea is drunk.

Calomel, in small doses, taken just long enough to produce a coppery taste in the mouth, but not long enough to salivate, is sometimes productive of the happiest effects. Some physicians make great use of the blue pill, in this disease, to obviate the costiveness;

and where it can be so managed as not to salivate the patient, it is a very good medicine.

Pills made of aloes and myrrh, called the pill rufi, form one of the best stomachics in use. The myrrh is slightly stimulating and very strengthening. The powder of myrrh may be taken alone, in a dose of twenty grains, three times a day. It warms the stomach and expels the wind, at the same time that it improves the strength of the digestive organs. The sulphate of iron mixed with myrrh, in the form of a pill, or Griffith's mixture, which is about the same thing, has helped very many people. Ipecac., in grain doses, will often open the bowels and improve the digestion. A quarter of a grain of tartar emetic, dissolved in hot water, and taken every two hours through the day, will have a similar effect.

If the dyspepsia has become a chronic disease, or a disease of several months' standing, bleeding will, in general, be improper, unless it be by leeches applied to the pit of the stomach. Blistering will be very proper, or a counter-irritation, excited by an ointment made of simple cerate and tartar emetic. The tartar emetic may be sprinkled upon the denuded skin, after a blister is drawn, and irritation kept up for one or two weeks. The agency of the tartar emetic has, in this way, often been productive of signally good effects.

In the beginning of the disease, strengthening medicines are inadmissible; but after the disease has impaired the general strength and relaxed the solids, it will be necessary to use them. The best tonic, as we have said before, is the oxide of bismuth, and it may be used much earlier in the disease than any other. The tincture of the muriate of iron, and the rust of iron, are often found more compatible with the state of the stomach than the vegetable bitters.

Quinine, in small doses, is, no doubt, the most strengthening of any of the vegetable tonics. One grain, taken early in the morning, is enough to begin with. If costiveness is a distressing symptom, a tea-spoonful of the elixir pro., taken a few minutes before each meal, will be found effectual. The little disturbance and irritation which it occasions in the stomach and small intestines make it peculiarly suitable in this disease.

If vegetable food is found to disagree with the stomach, on account of its tendency to fermentation and the formation of acid and wind, the patient must live chiefly upon animal food; but he should never eat more than a small slice at a time, and let this be fully digested before he resorts to more. Tea, coffee, and ardent spirits should be avoided entirely, in severe cases of the disease. In mild cases, weak dishes of tea or coffee may be drank with more impunity. To many people both tea and coffee are a poison; that is, they irritate and inflame the stomach, and produce all the distress which other poisonous substances create in the stomach and bowels.

In a state of health, an evacuation of the bowels occurs about once in twenty-four hours. In a state of health, also, this event is attended with a very strong desire and pressure, and followed with

as strong a feeling of relief. But when the bowels become sluggish and costive, the person seldom feels much pressed to go to stool, or experiences much relief when the operation is over. The bowels seem to have lost their sensibility to the load which oppresses them, and when it is thrown off they are as little sensible of the weight which is removed. A daily habit of attending to the natural calls of the bowels, however feeble the desire, should never be neglected. A long retention of the fæces is attended with the same weakening effects as a retention of the urine in the bladder by inobedience to its dictates.

The use of injections, although attended with some trouble and inconvenience, is, in severe cases of dyspepsia, a much better way of moving the bowels than by swallowing daily portions of physic. The stomach and small intestines are left untouched. Molasses and warm water, or manna dissolved in water, will, in general, be all the ingredients necessary to produce the effect.

Such will often be the pain and distress, and the want of sleep, in this disease, that relief can only be obtained by the use of opiates. Nor should these be withheld when the necessity of the case demands them. The morphine, in this disease, is in every respect superior to any other form of opium. Being in a great degree deprived of the astringent or binding property of opium, it is precisely the medicine which can be used with the least injury to the organs affected. Twenty-five or thirty drops of morphine can be used once or twice a day, should the case require it. Where a seirrhous state of the lower orifice of the stomach has been detected, the cicuta has been found one of the best medicines to ameliorate the condition of the organ.

We think that exercise before breakfast, in this disease, is pernicious. Food will never digest so well after the least fatigue. Experience, however, is the best schoolmaster. If, on trial, the person should find his appetite improved, and his digestion better, for early exercise, he should be allowed to pursue it. But we believe, in general, it will be found much better to delay exercise until after the stomach has been replenished with a sufficiency of food. With dyspeptics there is commonly a degree of faintness in the morning, arising from an emptiness of the stomach.

DYSURY—A difficulty in passing the urine.—In some cases of this affection, there is a painful, continual, and urgent pressure to pass the urine, while it only appears in drops; in others, there is a hot, scalding sensation, and a contraction of the passage. There are but few more distressing complaints than this. In general, it arises from an inflammation of the urinary passages, induced either by the gravel, by hard drinking, or by the venereal disease. It arises, however, in some instances, from a paralysis of the bladder, particularly in old people, and from the pressure of tumors, and of the womb in pregnancy. Accidental causes, such as the use of Spanish flies, taken internally, or applied in the form of blisters, will produce it.

In all urgent cases, the surest remedy is to draw off the water

by the catheter; this is often indispensable to save the bladder from mortification. Where there are evident signs of inflammation, such as pain, heat, and soreness in the parts, a quick, full, and hard pulse, and fever, the use of leeches, or bleeding from the arm, medicines to produce a sweat, to increase the flow of urine, and to drain the bowels will be needed.

Thirty or forty drops of laudanum or morphine, or ten grains of the Dover's powder, should be given to ease the pain and distress, but must not be relied upon for a cure; nothing short of a free passage of the urine should warrant us in the discontinuance of means for relief. The warm bath, both general and topical, is often of essential service. The best medicines to reëstablish the flow of urine are the sal nitre, in six grain doses, and the spirits of nitre and camphor. If the difficulty proceeds from the gravel, the remedies recommended in that complaint must be employed.

E.

EAR—The organ of hearing.—The anatomy and physiology of the ear are exceedingly interesting, but the mechanism is very intricate and difficult to describe in a manner to be understood, without a model. Its situation and shape are admirably adapted to its office, and all its numerous parts, however minute, undoubtedly have their respective functions, though some of them are but imperfectly understood by the best physiologists. For the sake of clearness, the organ is, in being described, divided into the external and internal ear. The upper and larger portion of the external ear is of a cartilaginous nature, and, from a resemblance which it bears to a certain kind of shell-fish, is called pinna, and the lower, soft and pendulous portion, the lobe. The deep depression, where the canal called the meatus auditorius externus commences, is the concha. The circumference of the pinna, which is so convoluted as to form a scroll, is called the helix, and the curved and vertical eminence in the middle of the pinna, the antihelix. The upper part of the antihelix divides into two small ridges, and the depression between them is called the scapha. Between the helix and the posterior half of the antihelix, is an oblong depression, which, for the want of a name, is called fossa innominata. That elevation of the pinna in front of the concha, and which inclines over it, is the tragus, and the elevation opposite, at the lower part of the concha, the antitragus cartilage. The canal called the meatus auditorius externus, leading to the internal ear, is in the adult about an inch in length and three lines in diameter, and terminates at the tympanum, or drum.

There are many small oval bodies in this tube which secrete the ear-wax, and a number of small muscles are attached to the external ear, the action of which is to move the different parts

and the whole ear upon the head; but as this action in the human ear is very limited, and apparently of little importance, a description of them would be superfluous. The tympanum is a membranous partition between the canal of the external ear and the labyrinth or internal ear. Within this partition is a small quantity of air, which is supplied by the eustachian tube, a duct of about two inches in length, which communicates with the pharynx, just behind the opening of the nostrils into the throat; and four small bones, called the malleus or hammer, incus or anvil, orbiculare or round bone, and stapes or stirrup, which are so articulated as to form a chain, one end of which is fastened to the membrane of the tympanum, and the other rests upon a small oval opening called the foramen ovale. The labyrinth is situated within the tympanum, in the petrous portion of the temporal bone, and consists of three parts,—the vestibule, the semi-circular canals, and the cochlea. The vestibule is a cavity into which the foramen ovale opens, and, with the cochlea, causes a protuberance on the tympanum, called the promontory. The semi-circular canals are three in number; they run inwards and backwards, and, joining together, form a common trunk, which ends at the posterior and internal part of the vestibulum. The cochlea is a bony structure, which resembles a snail-shell, and forms the fore part of the labyrinth. There are two small canals which go through the petrous bone from the labyrinth called the aqueduct of Cotunnus. The internal ear communicates with the brain by a long, irregular canal, which is completely incased in hard and thick bone. It is through this canal that the nerves of the ear pass out from the brain. The nerves are called auditory, portio dura, and trigeminus, or fifth pair.

Sound is not a distinct agent, but consists of vibrations in the air and other substances, variously produced by sonorous bodies; these vibrations are transmitted in rays or waves, and, falling upon the external ear, are conveyed as by a tunnel or ear-trumpet, and strike upon the tympanum with concentrated force. The air contained in the tympanum and the cavities connected with it, and the chain of small bones which rests upon it, are important vehicles for the transmission and augmentation of the sonorous vibrations, and of transmitting them to the gelatinous fluid contained in the internal ear, in the midst of which the pulpy filaments of the auditory nerve are situated. The essential part of the organ of hearing, however,—that without which there could be no sensation of sound,—is the auditory nerve, through which the sensation is communicated to the brain or organ of perception, and a consciousness of sound is thus realized.

EARACHE—Otitis.—The earache is caused by an inflammation of the organ of hearing. The internal part of the ear inflames, swells, becomes red and painful, and in most cases suppurates. It therefore must be treated, in severe cases, like every other inflammation. The earache is chiefly a disease of children; it rarely affects grown people. In common cases, it will only be

necessary to give the child a few drops of laudanum or morphine, and to fill the ear with a little wool moistened with sweet oil. To a child a year old, six drops of laudanum may be given, and to one two years old, seven or eight drops; and if the first dose does not ease the pain, as much more may be given in the course of two hours. If the pain becomes severe, so as to make the child cry out for a long time, a soft, warm poultice, made of white bread and warm water, should be applied to the ear, and renewed as often as it becomes dry. But, in most cases, we believe an anodyne timely administered, with a dossil of lint wet with oil or laudanum, will be all the medical treatment required. An inflammation of the ear runs its course in a remarkably short time. It frequently commences in the evening, after going to bed, and suppurates before morning. It will, however, in some instances, run three or four days, and be attended with a high fever, delirium, drowsiness, and convulsions. In these cases it will be necessary to resort to the lancet or leeches, cathartics, and sudorifics. To raise a sweat should be the first thing done, after we have found that the complaint will not yield to an anodyne and a poultice. For this purpose, hot herb teas may be drank, the bed warmed, and the feet put into hot water. If these means fail, a grain of ipecac., or ten drops of the wine of antimony, may be given every hour until a perspiration is established. A few grains of the Dover's powder will answer the same or a better purpose. Ether, put into the ear, will often succeed in reducing the inflammation. The cause of this painful disease is exposure to cold and dampness. Wet feet, and cold, chilly winds are to be particularly avoided by children. Fistulous ulcers and the loss of hearing are no uncommon consequences of the ear-ache.

EARTH.—Clay, crystal stones, and rocks, are the best examples of what, in scientific language, are called earths.

Clay is white, tasteless, inodorous, and infusible by the heat of a furnace. Pure clay is sometimes called argil, and at others alumine. Porcelain ware and various kinds of pottery are made of a paste composed of pure clay and water. It combines with oil of vitriol and forms the neutral salt called alum.

Crystal stones and rocks, the substance of which is called silex, are tasteless, inodorous, transparent, and fusible by the heat of a furnace. Glass is made of this earth, and, mixed with clay or argil, it makes the china ware. All transparent sand, stones, rocks, or mountains, are chiefly composed of silex or crystal earth. Gems and precious stones are composed of this earth.

Magnesia and lime are also accounted earths, although they have a degree of the alkaline quality. Many stones and rocks are composed of one or both of these earths. They unite with aquafortis, oil of vitriol, and the marine acid, and form neutral salts. The lump magnesia is a neutral salt, composed of the carbonic acid and the calcined magnesia, or the pure earth of magnesia. Both lime and magnesia are valuable articles in medicine.

There are six other earths, less known, but which enter into the composition of the sands, stones, rocks, mountains, and strata of soil, of which the globe is formed. The names of these earths are barytes, strontites, zircon, glaucine, ittria, and thorina. Barytes and strontites have active properties like lime and calcined magnesia. A curious property of the strontites is that of its salts causing inflammable bodies to burn with a blood-red flame.

EFFLUVIA.—This is the plural number of the Latin word *effluvium*. It means the same as the words contagion, fomes, miasm, miasmata, infection, noxious vapor, malaria, and virus. It is the name of the poisonous gas, air, or matter which arises from dead animal and vegetable substances, and the bodies of diseased persons. The antidotes of poisonous effluvia are the chlorides.

ELASTICITY.—This is that property in bodies which restores them to their original state after they have been bent or stretched. The India rubber affords a remarkable example of elasticity. The muscular and tendinous parts of the human body are endowed, in a greater or less degree, with this property. A perfectly elastic body or substance will restore itself completely to the shape and figure which it had before it was bent, stretched, or pressed. This property is supposed to arise from the attraction of cohesion.

ELATERIUM.—This plant is sometimes called the wild or squirting cucumber. The dried, inspissated juice of this plant is the elaterium in use. It is tasteless and inodorous, and is thought to be the most powerful purgative which has been discovered. From the eighth to the half of a grain is the usual dose, repeated at suitable intervals, until it operates. In the dropsy, it is thought to be an efficacious remedy, but requires great caution in its use. The active principle of the elaterium is called elatin.

ELDER.—The inner bark, flowers, and berries of the elder all possess more or less of the purgative property. The berries have a sweetish taste and contain malic acid.

The inner bark is the most active part; an ounce of it, infused in wine, will purge moderately. A syrup made from the juice of the berries is a good medicine for young children in eruptions of the skin. It opens the bowels and cools the body. A very cooling ointment is made of the inner bark, by boiling it, and mixing the liquor with cream. All good nurses in the country know the virtues of elder.

ELECAMPANE.—The root of this plant made into a syrup is a good medicine for a cough. It loosens the phlegm and quiets the tickling. If rightly used, it will often cure.

ELECTRICITY.—We believe there is scarcely an agent in the materia medica of more potency in the cure of certain diseases than electricity. This fluid is too well known to need a particular description. The body may either be charged with an extra quantity of this fluid, it may be drawn from the body, or shocks of the fluid may be passed through the body. The

nature of the fluid appears to be stimulating. If applied in a steady stream to the body, for some length of time, it will excite a profuse sweat and hasten the circulation. This is the manner in which it is the most successful in the cure of disease. Shocks in rapid succession will produce the same effect, but do not operate with so much certainty as a constant stream directed to some one part.

In the discussion of indolent tumors, the electrical fluid applied daily, in a stream, is the most certain remedy which we possess. In stiff joints, chronic rheumatism, palsy, the green sickness, and a suppression of the menses, it is often attended with the happiest effects. In deafness, incipient blindness, and in all cases where there is a dulness or numbness of the nerves, the electrical fluid should be tried. In scirrhus tumors of the female breasts, and of other parts of the body, electricity can be employed without danger, and effects a cure oftener than any other remedy.

There is an art in the use of this agent, as in the use of every other remedy, which can only be acquired by science, observation, and experience.

The point to which the operation of the fluid should be carried is the production of a gentle sweat. In a torpid state of the liver and other organs, electricity will be found of signal service. In acute inflammatory diseases electricity is improper. In the use of this remedy, it is important to obtain the most improved electrical machines; the old-fashioned machines are too inefficient and uncertain to be relied upon.

ELEPHANTIASIS. — This is an unsightly disease of the skin, particularly the skin of the legs. The affection when seated resembles the skin of an elephant, whence its name. The disorder often comes on gradually, without much previous illness, but is generally attended with more or less fever, pains in the head, back, and loins, some degree of sickness at the stomach, coldness, and shivering. Soon one of the glands in the groin becomes sore, painful, hard, swelled and inflamed, but does not suppurate. The inflammation extends in a red streak down the thigh to the leg, and in three or four days the fever begins to subside. The leg is left rough and uneven, with thick scales upon it, and the skin becomes as hard, brown, and thick, as that of the elephant. The scales do not separate and fall off, but keep on thickening until the leg becomes of an enormous size. After the fever has subsided, the disease may last for many years without disturbing the general health. The incumbrance of the bulky leg is felt as a great inconvenience, but otherwise the system remains unaffected.

The cause of the disease is not well ascertained. It is probably owing, however, to a filthiness of the skin, poor living, and some sudden check of the perspiration.

In the beginning of the disease, the inflammation sometimes runs so high as to require bleeding, purging, and sudorifics. The leg should be bathed well with warm water and the groin poul-

ticed. White poppy heads boiled in water and applied as a wash, will allay the irritation and pain. This disease is scarcely known in New England, but prevails extensively in the West Indies, among the people of color; it is not, however, confined to them. After the fever has subsided, the quinine, preparations of iron, and the mineral acids are given. The sulphur bath should be used, and opiates whenever they are required. A gentle sweat should be supported for a considerable time.

ELECTUARY.—An electuary is a medical composition of the consistence of honey. It is made by adding to any kind of powder a proportion of syrup or mucilage sufficient to make it of the requisite thickness. The lenitive electuary is one of the best in use. The ordinary dose of an electuary is the bulk of a nutmeg.

ELIXIR PROPRIETATIS.—This is an old, but very excellent, medicine. It is made by dissolving, in two pints of new rum or diluted alcohol, two ounces of myrrh, two ounces of aloes, and two ounces of sliced saffron. The whole must stand for four days, and then the liquor must be poured off from the sediment. The liquor or tincture must be kept in a bottle closely corked. Two tea-spoonfuls, taken once or twice a day, are the ordinary dose for an adult. It is strengthening, stimulating, and laxative. In cold, pale, watery constitutions, it is a medicine of singular efficacy. It is much used in dyspepsia, where a purgative is required which does not operate upon the stomach, but upon the lower portion of the alimentary canal. It corrects flatulency and indigestion. In obstructions of the menses, it operates very much like the Anderson pills. There is no better medicine to strengthen a weak stomach. The dose for a child two years old is fifteen drops, in a table-spoonful of water.

ELIXIR SALUTIS.—The elixir of health, as this composition is called, is made by dissolving or digesting in new rum, or diluted alcohol, the several following ingredients:

Leaves of senna, three ounces; root of jalap, bruised, one ounce; coriander seeds, caraway seeds, each, bruised, two drachms; diluted alcohol, or new rum, three pounds and a half. This composition must stand for seven days, and then be strained through a cloth. To the strained liquor or tincture add four ounces of loaf sugar. Dose, from one to two ounces. A child two years old may take a tea-spoonful. For costiveness, wind in the stomach and bowels, dyspepsia, and nervous complaints, the elixir of health is a very suitable cathartic; it warms the digestive organs at the same time that it awakens a peristaltic motion. In the colic of children it is one of the best of medicines.

ELIXIR VITRIOL.—This is the sour drop. It was formerly made by adding cinnamon and ginger to the diluted oil of vitriol or sulphuric acid; but latterly these articles are omitted. The elixir vitriol is commonly made by adding six ounces of the oil of vitriol to a quart of alcohol. The acid must be added slowly, or the heat which is generated will crack the glass vessel. It should

be recollected that it can be made only in a glass vessel. The dose is from ten to thirty drops, in half a tumbler of water.

The elixir vitriol is often made by mixing one ounce of the oil of vitriol with eight ounces of water, in a glass bottle. The dose of the sour drop, made in this way, is fifteen drops in half a tumbler of water.

The elixir vitriol is tonic and astringent. It is used in putrid, febrile diseases, hemorrhages or bleedings, menorrhagia, diabetes, hectic fever, and dyspepsia. It is often used as a gargle for the sore mouth and the putrid sore throat. The quinine, dissolved in a weak solution of the elixir vitriol, forms one of the best tonic medicines in use. It is peculiarly well adapted to a weak state of the digestive organs. It is the least heating of all the tonic medicines. Mixed with the mucilage of gum arabic or flax-seed tea, and sweetened with sugar, it makes an agreeable drink in influenza, pulmonary affections, and protracted fevers.

ELM BARK. — The species of elm bark made use of in medicine is the red elm. This tree is native to our country, and furnishes a new article of medicine. The inner bark is the medicinal part. It contains an abundance of mucilage, easily extracted by hot and boiling water. In dysenteries, diarrhœas, and the complaints of the bowels generally, it makes an excellent diet drink. It forms a substitute for the deficient mucus of the bowels; it sheathes the eroded intestines from the acrimony of their contents, and allays the irritation of the inflamed portions. The ground bark forms an excellent poultice for burns, old ulcers, and inflamed surfaces. The slippery-elm tea is made by pouring boiling water upon a handful of the bark. It may be drank as freely as water. In coughs, colds, and diseases of the lungs, it is equal to any mucilaginous drink which has ever been discovered.

EMACIATION. — People are often surprised at the rapid loss of flesh which takes place in a sickness of only a few days. But this is not so much a loss of the flesh as of the fluids of the body. The weight of the fluids of the body is eight or nine times greater than that of the solid parts, and as the fluids easily and constantly pass off from the system by means of the various secretions, the real bulk of the body may be lessened in a very short time, unless continually replenished. In most diseases the appetite is lost, and the digestive powers either greatly impaired or entirely suspended, and, of course, the diminution of the blood, and of all the fluids which proceed from it, must lessen the bulk of the body in proportion to the rapidity of the secretions. A very sudden loss in the bulk of the body takes place in a severe diarrhœa or profuse perspiration. In some diseases, the blood is often reduced to a very small quantity, probably to one eighth part of its usual amount. The heart, arteries, veins, and absorbents, all contract in a similar proportion, which, of itself, diminishes greatly the ordinary bulk of the body. Be the quantity of the blood what it may, the blood-vessels always accommodate themselves, in size, to the bulk of fluid which they contain.

The work of emaciation is performed by the secretory vessels, the lacteals, and the lymphatics. When the blood and other fluids are devoured, the solid parts, the fat, the flesh, and even the bones, are taken up and carried into the circulation to furnish matter for the secretions, the perspiration, urine, mucus, bile, and pancreatic liquor. The diminution of the size of the bones in chronic diseases is as remarkable as of the muscles and other soft parts. The diminution which takes place in the weight and bulk of the body in hot weather is owing to the excessive waste of the fluids of the body, which are easily replenished as soon as the waste by perspiration is stopped by cool weather.

The loss of strength is, probably, very nearly in proportion to the loss of the fluids of the body. The fat and the flesh may be diminished without any material loss of strength, but any alteration in the quantity of the blood and other fluids is sure to be followed by a corresponding alteration in the strength.

EMBROCATION. — Washes and liniments which are applied to any part of the body. Those in common use are alum-water, lead-water, acetate of ammonia in solution, volatile liniment, lime-water, spirits of camphor, and infusions of hemlock.

EMETIC. — Substances capable of exciting vomiting. They may be either vegetable or mineral. The best and safest vegetable emetics are ipecac., squills, lobelia, and bayberry-root. The mineral emetics most in use are the tartrate of antimony, sulphate of zinc, sulphate of copper, and alum. Many substances operate both as emetics and cathartics, such as thoroughwort, tobacco, and antimony. Where poisons have been taken, or the stomach overloaded with food, or oppressed with indigestible substances, emetics are indispensable. In the commencement of fevers, in lung affections, diseases of the throat and windpipe, in bilious disorders, and in dropsy, the utility of emetics has been demonstrated by the experience and observation of ages. Emetics are hurtful in cases of inflammation of the abdominal viscera, in ruptures, in a conflux of blood to the head, in the last stages of pregnancy and of inflammatory and typhus fever.

EMMENAGOGUE. — Medicines which promote the monthly secretion of females, such as aloes, antimony, tansy, American centaury, savin, tincture of flies, assafœtida, camphor, sweet spirits of nitre, calomel, and a local steam bath.

EMPYEMA. — Matter or pus formed in the chest after a pleurisy or peripneumony. The signs of it are a difficulty of breathing, an inability of lying upon the side opposite to that which has been inflamed, and an edematous swelling externally. The matter is sometimes let out by an incision into the chest.

EMPHYSEMA. — Swelling from the confinement of air under the skin in the cellular membrane. In some instances, the air will be confined to a particular place, and, in others, it will spread over the whole body. It arises from wounds in the chest, from poisons, and certain diseases, as the hysterics and hypochondrism. It is known by a crepitus, or a crackling noise upon pressure, and

difficulty in breathing. Great anxiety and oppression of the strength sometimes attend it. It is always dangerous when it proceeds from wounds of the chest, and violent poisons. It has been known to follow delivery, and to prove a troublesome complaint. The air is often let out by puncturing, and pressing upon the part. In cases where it results from wounds, the assistance of surgery is necessary.

ENCYSTED TUMOR. — This kind of tumor consists of a sac, or bag, containing sometimes a fluid, and at others, a solid substance. The matter contained in the sac in some instances resembles honey, in others fat, and in a third kind it will be soft and pulpy. Some grow to an enormous size, while others will be quite small. They have been known to contain a gallon of matter. It is almost in vain to attempt to disperse them; the only radical cure is to have them cut out. In removing them, it is important to dissect out the whole sac without wounding it. If any part is left, it may grow again. Salt is sometimes used to disperse them, but it almost always fails.

ENDEMIC. — Diseases which are confined to certain persons or to certain places. The sea-scurvy is endemic, and so is the fever and ague.

ENDOSMOSE AND EXOSMOSE. — The passage of air or water, or any other gas or fluid, through membranes and membranous substances. A bladder, half-filled with atmospheric air, being placed under a jar containing carbonic acid, becomes more distended; and if the bladder which is placed in the carbonic acid contained hydrogen, it becomes distended to bursting. If, on the contrary, the jar contains the hydrogen, and the bladder the carbonic acid, the bladder becomes collapsed. Gases, separated by moist animal textures, will pass through and combine with each other. The oxygen of the air, in this way, probably, unites with the blood in the lights without the escape of globules.

ENEMA. — An injection or a clyster. It is used both to convey medicine and nourishment into the body.

ENTERITIS — Inflammation of the Intestines or Bowels. — See *Inflammation of the Intestines or Bowels*.

EPIDEMIC. — Diseases which attack a large number of people at the same time and place. The influenza is often an epidemic. The Asiatic cholera was an epidemic. The scarlet fever, dysentery, and peripneumony are often epidemic. The prevailing disease or epidemic may be contagious, or it may proceed from the constitution of the atmosphere.

EPIGLOTTIS. — This is a lid composed of cartilage, which covers the upper orifice of the windpipe. In breathing, this valve opens and shuts; and in swallowing, it closes down upon the top of the windpipe to prevent the food from going that way. It is fixed by a ligament to the root of the tongue, the os hyoides, and the thyroid cartilage.

EPILEPSY. — It is very difficult, in some instances, to distinguish a fit of epilepsy from a fit of apoplexy. In both cases, the

person, if standing or sitting, commonly falls down; but in apoplexy there is little or no convulsion, whereas in epilepsy the limbs, the muscles, and other organs are violently agitated and convulsed, insomuch that it often requires the strength of two or three people to prevent the patient from doing violence to himself. The tongue will be thrust out of the mouth; the eyes will be rolled about by the agitation of the muscles which move the eyeballs; a volume of froth will pour out of the mouth, and often the tongue will be bit to a greater or less extent by the gnashing of the teeth. The contortions of the countenance will sometimes become frightful; but the subject of the fit, all the while, will be as insensible as if nothing had happened. In epilepsy there will often be a cessation of the convulsions, and the patient for a time will lie still and insensible; but they soon return with as much violence as ever, and will continue to come and go for a number of times in succession, when they will cease altogether. The person will change from the fit into a profound sleep, and awake quite rational and well. The senses, however, commonly return by degrees; and when the person comes to himself, he is entirely unconscious of what has happened, with the exception, perhaps, of feeling a little weakness, languor, nausea, or headache. The breathing and the pulse, during the fit, undergo something of the same agitation which takes place in the limbs and muscles. In this disease, one side is very apt to be more convulsed than the other; and sometimes the convulsion will be almost entirely confined to one side, and this side will become more or less paralytic.

The epilepsy is very evidently an affection of the nerves, but from what particular state of the brain and nerves it arises, is not easy to perceive. There is always some derangement or want of firmness in the nervous system, be the occasional causes of it what they may. The people most liable to the epilepsy are those whose minds and feelings are easily agitated; who pass easily from hope to fear and the reverse; whose temper is changeable; prone to gayety, and easily provoked to anger; and whose whole system is sensitive. The skin of such persons will be ticklish; the stomach easily oppressed; the eyes easily overpowered by light, and the ears by sound; the mind incapable of long-continued and intense study; and the bodily powers very susceptible of fatigue. Women, children, and men of an effeminate temperament, are more subject to this distemper than those who are strong and robust.

The disease is often attended or preceded by a peculiar sensation or feeling, as if a cold vapor or fluid were moving along from the arms and legs towards the head or heart. The feeling has sometimes been likened to an insect creeping along the body. This sensation has been called *Aura Epileptica*, epileptic air, and assigned as one of the causes of the disease; but we think it merely a symptom. We once heard a lady, who was subject to the disease, say, that she always saw a round black spot coming towards her eyes just as the fit was coming on, and when the

dark spot had reached her eyes, she became insensible. The aura epileptica we conceive to be a sensation of the same nature, and in no way the cause of the fit. Dr. Cullen advises the removal of the part where the aura epileptica commences, either by the knife or the cautery, and where this cannot be done, to blister it or to establish an issue upon it; but all this we conceive to be fighting a mere shadow; this peculiar sensation is a mere hallucination of the sense of feeling, and is a part of the disease. Some have advised the application of a ligature around the arm or leg, just above where the feeling commenced, for the purpose of preventing the fit; but we have no idea that a ligature was ever of any service in the disease. It is, however, a harmless experiment, and may amuse, if it does not cure.

Every kind of distress, whether of the mind or body, will cause a fit of the epilepsy. The sight of a hideous or disagreeable object, or the reception of painful news, will be sufficient to throw many people into epileptic convulsions. Odors which produce a sickish, disagreeable feeling at the stomach, will also occasion epilepsy. But the most frequent cause is distention or irritation of the stomach and bowels. Too heavy a meal, or the irritation of indigestible substances, by oppressing the stomach, have a strong tendency to bring on the disease. Many poisonous substances induce epileptic fits. The pains of childbed and the loss of blood are frequently the cause of convulsions. The effects of heat, of over-fatigue, and of emptiness, have the same tendency. The excitement of public festivals, the sight of crowds of new and strange people, the beating of drums, and the confusion of voices, are a prolific source of epilepsy.

Domestic Remedies. — These fits are rarely ever anticipated; they come on in the midst of health and enjoyment, so that no preventive means in the first instance can be adopted. But, after a person is ascertained to be in a fit of the epilepsy, — for the person has no sense himself, — he should be exposed to the air where it is neither very hot nor cold, and cold water should be dashed with considerable force upon his face, neck, and chest. His clothes should be loosened, and if the tongue has been gnashed between the teeth, the jaws should be opened and the tongue put back. If the person can swallow, or as soon as he can swallow, an emetic of ipecac. should be given, followed by plentiful draughts of warm water. But in most cases, nothing can be done, during the fit, except bleeding or the exhibition of injections. Bleeding is not always proper, and seldom needed, but an injection can always be exhibited without injury. Common salt, dissolved in warm water and mixed with molasses, is as safe a material as any which can be used. A tea-spoonful of ipecac., mixed with warm water, will operate quicker, and, on this account, is to be preferred where it can be readily obtained. After water has been dashed upon the face and neck, if the fit does not subside, the head and face should be kept wet with vinegar and water. The body, and particularly the stomach, should be gently rubbed with the hand, and if the fit

continues long, mustard poultices should be applied to the feet. Vomiting, or an operation by the bowels, or a flow of the urine, almost always dissolves the fit and silences the convulsions. A tea-spoonful of the spirits of camphor, mixed with a little cold water, or a swallow of wine, will often help very much to revive the patient after he has come out of the fit, and sometimes will excite the vital action before the paroxysms have relaxed.

If the fit has arisen from anything which has been eaten, the stomach should always be emptied as soon as the person is able to swallow. After this is accomplished, thirty drops of landanum or of morphine should be given, to allay the irritability of the nerves and to prevent the return of another fit. The bowels should then be moved, if it has not already been done, by an injection, by taking a dose of salts, senna, or jalap. On the recovery of the patient from the fit, the food, for several days, should be light and spare. A spare diet and exercise are the surest means of a restoration to health; and where the fits have become frequent and periodical, the person would do well to prosecute some kind of labor in the open air. All study should be relinquished, and the mind should be amused and recreated by objects which address themselves to the external senses. The occupation of the external senses diverts the mind from thinking and reflection, and is always congenial to the nervous system. Labor in the open air and an abstemious diet, or a diet composed principally of vegetables, must always constitute the basis of a cure. Every kind of business or study which occasions anxiety or disquietude of mind must be abandoned, at least until a cure has been effected. A journey to the Saratoga or White Sulphur springs, and a course of the waters, should always be tried where it can be conveniently done; but the patient should, at the same time, avoid the excitement and confusion of company, and every scene which strongly engages the feelings.

Professional Remedies.—If a person in full health and strength is attacked with a fit of epilepsy, and there is no evidence that it has been brought on by the quantity or quality of what has been eaten and drank, it will always be proper to bleed, either by opening a vein or by leeching. The pulse will not be often a criterion in such cases, as it is very much disturbed, but the propriety of bleeding must be learned from the general appearance of the person, the hardness of the flesh, the color of the skin, and the habits of living. An emetic of ipecac., sulphate of zinc, or antimony, will in general be proper, unless a previous evacuation of the stomach has been procured. Some depression of the digestive powers, or a stoppage, always accompanies this disorder. We have often noticed, that as soon as there was some little rumbling in the bowels, or evidence of motion, the person came out of the fit. It may, however, be, that the stomach is always the first organ to recover its vitality, and that this motion is only an evidence of the return of the sensibility in general.

The dispensation of an injection, composed of any of the sub-

stances which will operate as purgatives, will always be useful, and sometimes effectual, in dissolving the fit. A mixture of equal parts of the spirits of red lavender and the water of ammonia, in a dose of thirty drops, in a little cold water, is an excellent stimulant to awaken the sensibility. Ether is extremely vivifying, and may be given every ten or fifteen minutes.

After the fit has passed away, the system must be fortified against a second attack. In addition to an abstemious diet and severe exercise of body, the patient must resort to strengthening medicines. Among these medicines, perhaps none is better than Griffith's mixture, which is composed chiefly of iron and myrrh. The tincture of muriate of iron, in a dose of fifteen drops, three times a day, in any suitable drink, is another well established tonic. The red oxide of iron, either in pills or mixtures, is a tonic medicine in very common use. Tonic mineral waters should always receive a trial. Castor, in doses of ten or twenty grains of the powder, or one or two tea-spoonfuls of the tincture, is probably possessed of as much power as any other substance in allaying the spasms. After the stomach and bowels have been evacuated it will often be necessary to give an anodyne, either of laudanum or morphine. With some people opiates have a tendency to prevent the return of the fits, and even to destroy the disposition to them. The cicuta, combined with the red oxide of iron, has sometimes been given with success; as also the extract of gentian, and the quinine.

In those cases where epileptic fits are accompanied with costiveness and indigestion, or wind in the stomach, the elixir proprietatis and the balsam of life will be found of peculiar service. The tincture of aloes and canella bark, called picra, taken every day in a dose of two table-spoonfuls, for two or three weeks in succession, has been found in some instances to prevent the return of the fits. Assafoetida, musk, and camphor, should be tried where other things fail; but they do not enjoy the reputation which they formerly did in the cure of the disease.

Cold bathing should be practised in all cases where the constitution is vigorous enough to bear it. There will be many cases, however, in which warm bathing will be found more in agreement with the peculiar state of the constitution and the condition of the nervous system. Young people, especially those under the age of puberty, often recover entirely from this disease, but it is very apt to continue in those who are older.

EPISPASTIC. — Substances which raise a blister, such as flies, red pepper, mustard, and garlicks.

EPISTAXIS — Bleeding from the Nose. — See *Bleeding from the Nose*.

EPSOM SALTS — Sulphate of Magnesia. — This salt takes its name from the Epsom mineral spring, from the water of which it was first made. It is now obtained from sea water. After the muriate of soda (common salt) has crystallized, the water which remains, in the manufacture of salt, contains the sulphate of

magnesia. It is extremely bitter, and consists of needle-like crystals. It will dissolve in an equal weight of water. It is a safe, easy, and thorough purgative, and probably more used than any other medicine of the kind. In all inflammatory affections, it has obtained a very high and a just repute. An ounce operates as a brisk cathartic. Dose, for a child two years old, a tea-spoon even full.

ERGOT—Spurred Rye—*Secale Cornutum*.—A certain disease incident to rye produces a kind of fungous grain. The seeds are enlarged, and when dry are of a black, or violet color, and of a brittle texture. This substance, taken in a dose of ten or fifteen grains, during parturition, has the singular power of increasing the frequency and the strength of the pains, and, of hastening the birth of the child. In lingering labors, it is now much used to assist the natural efforts of the uterus. Its operation is remarkably quick. In ten or fifteen minutes from the time it is swallowed, it will often produce expulsive pains. The powdered seeds are infused in boiling water, and after standing for a few moments, the liquor is fit to be taken. It is also given to produce the expulsion of the after-birth, in cases of hemorrhage and delay. It will not operate effectually upon every individual in labor, but there is no question about its expulsive properties in general. Farmers have long known the fact that rye will have a similar effect upon domestic animals, and have avoided feeding them with this species of grain while with young. The diseased grain has a much more powerful effect than that which is sound. Wheat and other grains are liable to a similar disease. Ten or fifteen grains of the powder of ergot can be taken in some convenient vehicle, or an infusion of it in boiling water, and repeated at intervals of half an hour or an hour.

ERRHINE—Snuffs.—Those medicinal snuffs which are most in use are, the impalpable powders of the bayberry-root, blood-root, hellebore, calomel, and asarabacca. In catarrh, polypus, and some other affections of the lining of the nose, and in several disorders of the eyes and head, errhines are found extremely serviceable.

ERUPTION.—Pimples, blotches, spots, pustules, and running or dry sores upon the skin. The itch, tetter, small pox, chicken pox, measles, and the blotched face, are examples of the meaning of eruption.

ERYSIPELAS—St. Anthony's Fire.—See *St. Anthony's Fire*.

ERYTHEMA.—A morbid redness of the skin, such as is observed in the cheeks of hectic patients, in the surface of boils, and other species of inflammation. It is the inflammatory blush.

ESCHAROTIC.—Caustic and corrosive substances, or such as destroy or decompose the flesh and solid parts of the body.

ETHER.—There are several kinds of ether, but the description most in use, and the most valuable, is the sulphuric or vitriolic ether, or that which is distilled from equal parts of alcohol and oil of vitriol. It is the lightest, the most evaporable, and the most

inflammable of them all. Left exposed to the air, it is dissipated in a very few minutes; and if dropped upon the skin it excites a sensation of cold by the sudden abstraction of heat. It has a pungent taste, and a penetrating odor. It is a cordial, an anodyne, a stimulant, and antispasmodic. In faintness, sickness at the stomach, giddiness, epilepsy, hysterics, asthma, angina pectoris, and in almost all diseases where the powers of life are prostrated, ether is an invaluable and efficacious remedy. In its action it is quick and diffusive. Even the breathing of it has a tendency to recall life. In fainting fits it is often applied to the nose. The dose for an adult is from half a teaspoonful to a teaspoonful.

ETHERIZATION.—Stupor or insensibility produced by breathing either the rectified ether or the chloroform. The ether may be inhaled by placing a sponge wet with it to the nostrils while the mouth is closed. The vapor is then breathed for one or two minutes, or longer, until the requisite degree of stupefaction is produced. The effect is pleasurable in a high degree, until the patient is lost in unconsciousness. Its use has become frequent in amputations and other painful operations in surgery, in difficult cases of puerperal labor, in spasms, tetanus, hydrophobia, asthma, convulsions, and in all those diseases where opium, laudanum, camphor, alcohol, and other narcotics and anodynes, are safe and proper. The effect of complete etherization resembles complete intoxication by spirituous liquors, and, perhaps, is not more dangerous, nor less harmless. The same circumspection and judgment are required in its adaptation to cases, as in the use of other active narcotics.

EXCRETION.—The act of separating from the blood fluids and solids which are useless to the body, such as the urine, perspiration, alvine contents, menses, and milk. The power or process of excretion and secretion appears to be the same.

EXERCISE.—The benefit of muscular exercise is well known, but the *manner* in which the system is benefited can only be known by an illustration of the physiological phenomena. The whole illustration depends upon one simple, obvious fact. In bleeding at the arm, for instance, if the fingers and fore-arm are put in motion, the quantity of blood emitted from the orifice is instantly and sensibly increased. The amount of blood which flows through the veins by the addition of this motion of the muscles is doubled or trebled in the same time. Everybody knows the necessity of keeping a person still who is bleeding at the nose, the lungs, or in any other part of the body. We shall be sufficiently understood without going into a description of the circulation of the blood. When the whole body is in motion, the same proportional increase in the quantity of blood takes place in all the veins. Twice or three times the ordinary amount of blood is sent into the heart in the same time. The heart, compelled to receive the blood, propels it immediately into all the organs of the body: the lungs, the brain, the stomach, the liver, the bowels, &c. The organs, being thus doubly fed by the agency of the muscles upon the blood-vessels, are actually increased in size, in the same manner as plants

and trees are increased in size, by increasing the amount of nourishment which they imbibe.

The great increase in the size of the muscles, especially in the size of the muscles of the fore-arm and legs, in people who exercise constantly and laboriously, is known to everybody. A corresponding increase in size takes place in all the other organs of the body.

In opening the body of a man brought up to labor, we may observe that it is not simply his muscles which are enlarged; his brain, his lungs, his heart, his stomach, his liver, bowels, bones, and every other part, are all of a size corresponding to the greater size of his muscles. Yes, the brain of the laboring man is as much larger and stronger than the brain of the inactive man, as his muscles are larger and stronger. The organs of his body have been more constantly and abundantly supplied with blood than the organs of the inactive man—premising that he has received an ample supply of food. The broad and ample chest of the active man only expresses the magnitude of the lungs and the heart which it contains; the broad back and well-developed abdomen only show the ample size of the organs which they environ.

Exercise, by itself, has no tendency to increase the size of the body in general, or of the organs in particular. We should say its tendency was to diminish its size. Neither is it by mere jactitation or motion, in itself considered, that the body is benefited. The main use of exercise consists in its agency in supplying the organs with a greater amount of blood. Blood is to the organs what food is to the stomach. It is their nourishment and strength. The constant cry of all the organs is for blood, more blood! Faintness and languor ensue in some one or in all of the organs when this demand is not satisfied.

Exercise is often recommended for a want of action or torpor in the various organs of the body, and very justly. For instance, it is recommended for a torpor of the bowels; but mere motion can have no effect in awakening the peristaltic action of the bowels; it is only by the agency of exercise in forcing fresh supplies of blood into the coats of the intestines, thereby giving them new life and vigor, that the peristaltic motion is increased. People can never be made to take a proper degree of exercise until the necessity and the benefit of it are clearly demonstrated. This will constitute a sufficient and permanent motive. Laborious exercise will then even be valued and practised by the weak and fragile. Health, strength, and happiness very much depend upon the agency of muscular exercise in the propulsion and distribution of the blood. It is well known that the right arm and hand, as well as the right leg and foot, are both larger and stronger than the left. This effect is the result of the greater exercise which the right arm and leg are subject to; that is, the muscles of that side meet with a more full and constant supply of blood, and are consequently enlarged and strengthened. The circulation of the blood will always require the agency of muscular exercise, for the health of the body and

the full development of its organs. Neither the brain, the stomach, nor the lungs can attain their full strength and size without it. Weakness and imbecility will lurk somewhere. It not only aids the circulation, but equally assists all the secretions and excretions.

It matters but little what the nature of the exercise is, provided it be constant, and sufficient to aid the circulation of the blood. Some active employment, however, which engages the mind at the same time that it aids the moving powers of the body, is to be preferred. Farming, gardening, and all rural pursuits, seem to comport best with the health of the body and of the mind. Any active, mechanical employment will answer a similar end. Exercise, in some form or other, is as important for children as food. The organism of the body can never be perfected without it. People of leisure must seek exercise in active amusements, such as walking, fishing, hunting, and riding.

EXFOLIATION.—The separation of dead pieces of bone from the living. When bones are badly splintered and shattered, the fragments separate and make their way through the flesh to the surface.

EXPECTORANT.—Medicines which promote the secretion and discharge of phlegm from the windpipe and lights. The most notable of this class are squill, gum ammoniac, antimony, ipecac., opium, balsam copaiva, elecampane, seneca or rattle-snake root, and lobelia.

EXTRACT.—Medicines which are obtained from plants and roots by boiling and evaporation. After boiling the bark, roots, stems, or leaves of plants long enough to get their strength, the water must be evaporated or boiled down over a slow fire, or, which is altogether better, a salt-water bath, or another vessel of water, kept at a boiling heat, in which the vessel containing the plants to be operated upon must be partially immersed. The liquor of the boiled barks, roots, or other parts of the plant, should, in general, be simmered down to the thickness of honey, when, if left to cool, it will become hard enough to make into pills and boluses. The juices of plants are sometimes expressed and dried, or inspissated in the sun, and receive the name of extracts. An extract of the cicuta or hemlock is sometimes made in this way, and, at others, by boiling and evaporation over a fire.

EXTRACT OF BUTTERNUT.—This medicine is prepared by cutting up the unripe fruit or the inner bark of the butternut in small pieces, and adding to it eight times its quantity of water. When one half of the water is boiled away, the rest must be strained, put into a suitable vessel, and simmered down to the consistence of honey, in another vessel of boiling water, saturated with salt. The salt dissolved in water enables it to retain much more heat; or, in other words, salt water heated to boiling is much hotter than fresh water, and, for this reason, affords a higher and more even heat.

The extract of butternut is an excellent domestic purgative. Dose

for an adult, from ten to thirty grains. In the same way may be made extracts of lobelia, thoroughwort, white poppy, and cicuta, or of any other plant whose virtues do not reside in oil too volatile to be dissipated by boiling.

EXTRAVASATION OF BLOOD.—After the arm or leg, or any part of the flesh, has received a heavy blow, the hurt place will become black and blue, or purple. This appearance is owing to the rupture of some of the blood-vessels, by which blood is let out, and spreads under the skin, giving the wound the purple color. This is called extravasation. This accident will sometimes take place spontaneously in the white of the eye, whereby there will be a large red blotch, occupying a quarter or half of that part of the eye; the blood-shot part will neither be sore nor painful, which distinguishes it from an inflammation of the eye. An extravasation of blood anywhere upon the surface of the body is not dangerous, but usually is absorbed in a few days, leaving the part at first a little yellow, but which soon becomes white as before. In bleeding at the arm, from a small puncture, the blood will often spread under the skin, and produce what is called a thrombus, or bag of blood; the skin will turn purple from the color of the blood which appears through it, and look, for a day or two, very bad, but the accident is accompanied with little or no danger, and soon disappears.

In the case of an extravasation of blood in the white of the eye, lead-water, or a little eye-water, will commonly be all the medicine which is required; and, in other parts of the surface, the application of a little pressure upon the part by means of a tight bandage and a roll of cloth under it. Blood boils, which are an extravasation of blood, should be allowed to go away of themselves.

An extravasation of blood into the ventricles of the brain, the cavities of the chest, abdomen, and bladder, is attended with danger, and often produces sudden death. The other fluids of the body are sometimes extravasated, or let out of their proper vessels into other parts. The urine and the serous fluid are both liable to extravasation. In some situations, the blood or other extravasated fluids can be let out by puncturing the part, and much mischief thereby prevented. The application of lead-water, or a solution of the muriate of ammonia, may be applied, to hasten the absorption of the extravasated fluids.

EYE—The organ of sight.—In the formation of the socket or orbit of the eye, there are seven bones, more or less largely concerned. It is of a conical figure, the apex projecting backwards into the cavity of the skull, and the base, which is a little narrowed by a rim of bone, being in front. The ball of the eye is of a spherical form, and lies imbedded in fatty and cellular substances, which occupy a considerable portion of the socket. The strength and figure of the ball depend principally upon a strong, firm, membranous covering, called the sclerotic coat. This coat has but few vessels that circulate red blood, and constitutes that part of the eye

which, in a healthy condition, appears white. It is perforated on the back side for the entrance of the optic nerve, which proceeds from the brain and terminates in front at the circumference of the cornea. The cornea is a dense, perfectly transparent, and colorless membrane, and takes its name from its resemblance to horn. It forms a segment of a smaller sphere than that of the other portion of the globe, and, consequently, is slightly prominent. The manner in which it joins the sclerotic coat, its transparency, its prominency, give it a strong resemblance to the crystal of a watch set in a case. The *apparent* color of the cornea is caused by its perfect transparency allowing the iris to be distinctly seen through it. In a sound state, there is no red blood circulated in the vessels of the cornea; but when the vessels are enlarged by inflammations, they may sometimes be distinctly seen carrying it into its substance, and thereby producing a degree of opacity. The ball of the eye is divided transversely into two unequal portions by a flat membrane called the iris. The circumference of the iris corresponds with the circumference of the cornea, and is circumscribed by what is called the ciliary ligament. The internal and posterior surface of the iris is covered with a black pigment, and has been called uvea. The anterior surface of the iris is the part of the eye that appears colored, and, as is well known, the color is different in different individuals, corresponding, in some measure, with the complexion of each particular individual. Through the centre of the iris is a circular hole, which is the pupil. In all healthy eyes the pupil is black, because the rays of light, instead of being reflected as they are from the iris, pass directly through it into the back part of the globe and are absorbed by the black pigment with which the internal surfaces of the coats of the eye are lined. The size of the pupil depends upon the degree of light and sensibility of the retina. When the light is strong, the circular fibres of the iris contract, thereby diminishing the pupil and shutting out some portion of it; but when there is but little light, or the retina loses its sensibility, the fibres of the iris relax, and the pupil dilates, so as to admit a greater number of rays to pass through it. Within the sclerotic coat, and in contact with it in almost its whole extent, is a very delicate and exceedingly vascular membrane, called the choroid coat. Like the iris, its internal surface is covered with a kind of black paste or pigment,—*pigmentum nigrum*. Immediately around the margin of the cornea, the choroid and sclerotic coats are firmly connected together by the intervention of cellular substance, which is dense and compact, and forms a ring called the ciliary ligament. The circumference of the iris is attached to this ligament. Immediately behind the iris, and within the circumference of the ciliary ligament, the internal face of the choroid coat forms a considerable number of radiated folds or little ridges, which converge from behind, forwards and inwards. These folds coalesce one with another and form the ciliary processes, the central extremities of which are loose and float in the aqueous humor. The retina, which is considered as

one of the coats of the eye, consists of a delicate, vascular, membranous web, upon which is spread a medullary, pulpy substance; this substance terminates at the commencement of the ciliary processes, but a membrane of a different texture is continued from it to the crystalline lens. The optic nerve is diffused through, or constitutes a part of, the retina, and it is this expansion of the nerve which is the seat of vision. There are three humors in the ball of the eye, the aqueous, the vitreous, and the crystalline. Between the cornea and the iris is a small cavity called the anterior chamber, and back of it is a smaller one, called the posterior chamber; these cavities communicate with each other through the pupil, and are filled with a clear, transparent fluid, called the aqueous or watery humor. A very delicate membranous capsule invests this humor, and lines the internal surface of the cornea. In the centre of the eye, immediately behind the pupil, is a dense, perfectly transparent, double convex body, imbedded in a depression of the vitreous humor, which is called crystalline lens. It is softer at the surface than at the centre, and, like the other humor, is invested with a tunic or capsule, which, also, in a healthy state, is transparent. An opacity of the lens, resulting from inflammation or other causes, constitutes the disease called cataract. It is not absolutely essential to vision, and when required by disease, may be removed, and a glass of a similar shape, worn in front of the eye, substituted for it. The use of the lens is to refract and concentrate the rays of light in such a manner that a distinct image of the object may be formed at the bottom of the eye upon the retina. A large proportion of the cavity of the eyeball is occupied by the vitreous humor. As its name implies, this humor resembles melted glass. The peculiar consistence of this humor, however, is owing to a thin, transparent membrane, called the hyaloid coat, which not only incloses it like a sac or bag, but so passes through it as to form a great number of partitions, and a corresponding number of small, irregular cells, each of which contains a minute drop of a clear, colorless fluid. The vitreous humor is supposed to be necessary to give the ball of the eye a suitable size for the performance of its optical functions, to keep the retina properly distended, and to retain the lens at the proper focal distance from the retina. An opacity of the hyaloid membrane is one cause of blindness which is incurable.

There is one coat of the eye that is common to the lids and the ball, the tunica conjunctiva. It commences at the edges of the lids and appears to be a continuation of the skin, though differing from it essentially in its structure. It lines the internal surfaces of the lids, and is reflected forwards on to the ball, the anterior third of which it completely covers, not excepting the cornea. In a healthy state, this membrane is white and perfectly transparent; but when inflamed, the vessels enlarge and become distended with blood, giving it, in some instances, an intensely red appearance. With the exception of that portion which is over the cornea, the conjunctiva is so loose that it can easily be taken up

with a pair of forceps, and portions of it cut off with scissors,—an operation that is sometimes necessary, in order to destroy the blood-vessels running on to the cornea in cases of inflammation, by which the transparency of this important coat is liable to be destroyed.

The eyelids or palpebræ are formed by a slit or orifice in the skin; under the skin is a thin layer of muscular fibres, called the orbicularis muscle, and under this there is a plate of cartilage; and next to the ball the lining membrane heretofore described. The upper cartilage is broad in the middle and narrow at each extremity, corresponding in shape and size with the eyelid. In the under lid, there is only a narrow, flat rim of cartilage, extending but a little distance from the margin. On the inside of each eyelid, between the conjunctiva and the cartilage, are a number of small yellowish, white lines, or glandular bodies, which secrete an unctuous matter that serves to prevent the tears from running over the lids, and to prevent them from sticking together. These are the glands of Meibomius. The orifices of the ducts leading from these glands open on the edges of the lids. The tears, the office of which is to keep the eyeball and lid moist, clean, and flexible, are secreted by the lachrymal gland, situated in a depression in the upper surface of the orbit, near its external margin. There are six or seven excretory ducts to this gland, and they terminate near the upper edge of the cartilage, at the external angle of the eye. "The tears are carried from the eye by two small canals, which commence one on each eyelid, at the internal extremities of the cartilages, opposite to each other." The orifices of these canals are near the inner canthus or angle of the eye; they are, in a natural state, always open and can be distinctly seen. Through these puncta lachrymalia, as they are called, the tears run down into the lachrymal sac, a membranous bag, situated upon the side of the nose, just below the corner of the eye, and from this sac they are conducted into the nose through the lachrymal duct. Near the junction of the eyelids, at the inner angle, there is a small triangular space, which is occupied by a minute, reddish body, having a few short hairs growing from it, and which is supposed to be glandular, denominated the *caruncula lachrymalis*. It probably aids in directing the tears into the puncta lachrymalia.

The eyeball is moved in its orbit, in various directions, by six muscles, each one of which can act by itself, or in conjunction with another. Four of these are straight; they all arise from the back part of the socket, and are inserted into the sclerotic coat, in the form of flat tendons, on the front part of the globe, near the cornea. Being opposite each other, they move the ball in four opposite directions. The other two are called oblique. These arise near the origin of the straight muscles, and are inserted between the insertion of the superior and internal straight, and the internal and inferior straight muscles. By the individual and combined action of these muscles, the eyeball may be turned in

almost every direction. The cutting of these muscles on the front part of the eyeball constitutes the operation for strabismus or squinting.

EYE-WATER.—This wash is made, in general, either by a solution of white vitriol, sugar of lead, or some other cooling salt, in water, or by an infusion of opium, hemlock, oak-bark, or some other anodyne, or astringent substance, in boiling water. Rose-water is the common menstruum used in making eye-water. One or two grains of white vitriol dissolved in an ounce of rose-water is the common form.

F.

FAINTING—Syncope.—Fainting is commonly preceded by a feeling of distress about the heart, swimming of the head, a slight degree of sickness at the stomach, dimness of sight or a sense of things growing dark, and coldness in the hands and feet. In some cases, there is a palpitation of the heart and a sense of fulness ascending from the stomach to the head. In all cases, the breathing and motion of the heart are either suspended or become much weaker than usual, the face and lips become pale, the eyes turn up in the head, the pulse becomes extinct or scarcely perceptible, motion in every part of the body languishes or ceases, the senses are bedimmed or gone, and the person is more or less unconscious of what takes place. People in fainting are sometimes convulsed, though not often.

The most frequent cause of fainting is the loss of blood or some other sudden depletion. Fevers and inflammatory diseases are ushered in by fainting. In many cases, fainting is owing to an affection of the nervous system; in others, to some organic or functional disease of the heart. After patients become weakened by disease, fainting takes place very easily. We have long believed that the action of the spleen, by a sudden transference of a large quantity of blood from the arterial to the venous system, was the cause of this affection in people who faint from the effect of the passions and emotions of the mind, and the sensations of the body, or who are in the habit of fainting from slight causes. The spleen and its blood-vessels are often greatly enlarged, and must exercise no inconsiderable agency in the animal economy.

Cold water, dashed upon the face, has, in general, the most sudden effect in restoring the powers of life. Air should always be freely admitted, and gentle rubbing employed. Ether, spirits of camphor, hartshorn, or vinegar, should be held to the nose, and a little wine, or some other stimulant, taken as soon as the ability to swallow returns. If the stomach is oppressed with food, or any nauseating substance, an emetic should be given. Where fainting

depends upon other disorders and affections, the remedies must be adapted to the cure of the primary diseases.

FALLING OF THE RECTUM OR LOWEST PORTION OF THE BOWELS—*Prolapsus Ani.*—In children and old people, the lower extremity of the bowels will sometimes protrude, in consequence of a long continued diarrhœa, or of a weakness of the part. After the end of the bowels is turned out beyond the sphincter, it is apt to swell and become sore and inflamed.

The first object is to replace it as soon as possible by pushing it back with the fingers. If it is so much swelled as not to go back easily, it should be very gently bathed with cold water, or, which is better, iced water. The cold of the water or ice will contract the distended blood-vessels and reduce the bulk of the protruded part. In the bowel complaint of children, a protrusion of the lower gut is no uncommon occurrence; and as they are apt to be a good deal upon their feet, it is often difficult to keep the bowel in its place.

A tea made of oak-bark is an excellent wash where the part is swelled and hard to return. A solution of the white vitriol, or of the sugar of lead, in the proportion of three grains of the vitriol or lead to one ounce of water, may be applied with a piece of sponge, or soft linen. Alum or borax, dissolved in warm water, are often applied with success. Injections of decoction of oak-bark and alum, or other astringents, are also very beneficial. In some cases there will be so much swelling and inflammation as to require the use of warm fomentations with milk and water; or, which is better, a soft white bread poultice, covered over with a piece of muslin, and kept on with a bandage running over the shoulder, or fastened around the waist. In the worst cases, leeches must be applied very near the part, or immediately to it. Where it proceeds from costiveness and hardness of the fœces, the gentlest aperients and mild injections must be used. The butternut pills answer very well in such cases, but where it can be obtained, the lenitive electuary, taken every day, is decidedly the best medicine which we have ever used. A piece of the size of a nutmeg is the ordinary dose for an adult, although it will sometimes require more, and, in other instances, less will be needed. Where it arises from long continued purging, it will be advisable to give opiates to keep the bowels still. The part should always be kept as free as possible from being chafed or rubbed by the clothes, or from going long unreduced. It is sometimes necessary to remove the part by the knife.

FALLING SICKNESS—Epileptic Fits.—See *Epilepsy*.

FALLING OF THE WOMB—*Prolapsus Uteri.*—In this disease the womb is displaced and descends into the vagina. In some cases, it will only descend a little way; in others, it will descend half way down the passage which leads to the womb; and, in the worst cases, a part or the whole of its length will protrude from the vagina. The disease happens to females of all ages, but much the oftenest to those who have borne children.

It commences with bearing-down pains, and an uneasy sensation in standing and walking. The womb, at length, falls so low as to hinder the discharge of the water, without laying down or pressing back the displaced organ. It often produces languor and inability to perform any very active duty.

It is sometimes produced by general weakness of the system, induced by other diseases; but, more commonly, it is the consequence of frequent miscarriages, profuse hemorrhages, the use of too much force in difficult labor, and too early and violent exertions after delivery. In unmarried women, it is occasioned by jumping, dancing, and too great exertions of the strength. It is always a troublesome, painful, teasing disorder, and although it does not often destroy life, it makes it very miserable. In those who are afflicted with it, it disappears after the fourth month of pregnancy, as the womb is then too large to remain longer in the vagina, and ascends into the abdomen. Pregnancy often cures the disorder entirely, from the support which the womb receives from the bones of the pelvis, and the changes which it undergoes in the process of gestation. In case of the protrusion of the uterus, it will often become irritated, inflamed, and ulcerated. The organ itself has sometimes been extirpated before a cure could be effected.

In the falling of the womb, the first thing to be done is to replace the organ in its natural situation. This must be done by a recumbent position, and crowding the organ back as far as it will go. While the person is in this position, the womb may be maintained in its place by a ball of sponge wetted with a weak solution of white vitriol. This should be renewed as often as two or three times a day.

To strengthen the ligaments of the uterus, and to restore the tone of the relaxed muscles, injections of lead-water or of white vitriol into the vagina should be employed two or three times a day, for several weeks. The material of these injections should not be stronger, in the commencement, than three grains of sugar of lead, or of white vitriol, to an ounce of water, and gradually increased in strength.

If the person is able or disposed to walk and stand, the womb may be supported by an instrument called a pessary, which will be found for sale at almost every apothecary's store. The instrument is made either of ivory, wood, or India rubber, and often renders the person very comfortable while wearing it. There is a new instrument called the utero-abdominal supporter, which is thought by many, to be an improvement upon the pessary. As in this disease there is commonly a weakness of the whole system, a resort must be had to strengthening medicines, gentle exercise, and the open, fresh air. The preparations of iron are found to be the most available. Griffith's mixture, the tincture of muriate of iron, and mixtures or pills of the red oxide, are the best and most common forms. The quinine and the tonic bitters should be tried. A journey to the Saratoga springs, and a course of the water.

will often be found of great service. Cold bathing has a powerful effect in increasing the cohesive power of the muscles, and in restoring their tone. Every species of dissipation must be avoided, or a cure will be hopeless.

FALLOPIAN TUBES. — Two small ducts which open into the ovaria from the womb. The ovaria are two little apartments, or chambers, which are supposed to be immediately connected with conception.

FASCIA — The thin, transparent membrane which covers every muscle. It also encloses each fibre of every muscle as in a sheath, lubricates it with fat, and enables it to slide among its fellows with admirable ease.

FAT — Adipose Substance. — This substance is secreted by the cellular membrane, which is interwoven with all the soft parts of the body. The amount of fat which accumulates in the body sometimes doubles its weight, and has been known to treble it. A certain amount of fat is necessary to the performance of the animal functions, but this amount is probably very small. The analysis of fat discovers two distinct principles; — one is liquid at the temperature of 60°, and is called elain; the other is solid, and consists of small silky needles. Elain is fusible at about 45°, and the other principle, which is called stearine, is fusible at 100°.

Elain is now manufactured in the West from hog's lard, and sold as lard oil. It is as liquid and inflammable as whale oil.

Fat contains, in round numbers, seventy-nine parts of carbon, eleven parts of hydrogen, and ten parts of oxygen. The theory has lately been advanced that in the formation of fat there is an evolution of heat; that the oxygen set free in this process is given out in combination with carbon and hydrogen. It is also contended that the fat, in the absence of food, supplies the carbon and hydrogen which are consumed in breathing or respiration, and thereby keeps up the natural heat. It is true that life will continue much longer without food in fat animals than in lean ones.

FAUCES — The Throat. — The throat commences behind or back of the tongue and almonds of the ear, and ends at the commencement of the windpipe and meatpipe.

FELON — Whitlow — Run-round — Paronychia. — This is a painful, inflammatory swelling around the end of the finger, or root of the nail. It is painful and troublesome in proportion as it is more or less deep-seated. Where only the skin is inflamed, it is soon well; but where it sinks deep into the flesh and reaches the bone, it is exceedingly painful, and longer in suppurating. When the inflammation is near the surface, the skin is red; but if deep-seated, there is no appearance of redness, although the swelling be considerable.

The best remedies in superficial felons are the applications of rum, vinegar, lead-water, or solutions of zinc and alum; but when deep-seated, leeches should be applied, salts or other cooling medicines should be taken, and the diet should be light.

Poultices are not, in general, of much service. If the pain is severe, a dose of laudanum or morphine should be taken, once or twice a day, to procure rest at night. The only sure relief is to open the felon and evacuate the matter. In slight cases this may be done with a common needle, but when the inflammation is near the bone, it requires the hand of a surgeon. After the felon has been opened, a soft, warm poultice will be beneficial.

FEMUR. — The thigh-bone, which extends from the hip to the knee.

FERN — *Polypodium Filix Mas.* — The medicinal part of this plant is the root. It is mucilaginous, astringent and bitter. If chewed, it has a sweetish taste. A dose of the powdered root is from one to two drachms. It is celebrated for its power in expelling the tape-worm. For this purpose it is necessary to drink a pint of the strong fern tea, daily, until the worm is expelled.

FEVER. — An increase of heat, a quick pulse, furred tongue, a depression of the strength, and a peculiar affection of the stomach, constitute the most uniform and general symptoms of fever. There are various kinds of fever, which will be found treated of under the names of fever and ague, intermittent fever, bilious or remittent fever, child-bed fever, continued fever, or fever continued, hectic fever, inflammatory fever, miliary fever, lung fever, milk fever, scarlet fever, typhus fever, typhoid fever, and yellow fever.

FEVER AND AGUE — Intermittent Fever. — The fever and ague is one of the most singular diseases which afflicts the human race. The first warning which, in general, the patient has of its attack, is being seized with severe chills; he begins to shake all over with a feeling of intense cold; the teeth chatter; the face, hands, and skin, become pale; the size of every external part of the body is diminished, and the skin over the whole surface of the body becomes rough and wrinkled. How such an intense feeling of cold can be experienced in the warmest day of midsummer, or in a warm, comfortable room, where no change of temperature actually takes place, is a phenomenon which has hitherto remained inexplicable, but is probably owing to some affection of that power or of those powers which generate the heat of the body. Previous to the accession of the chills, the shaking, and the chattering of the teeth, the patient will often feel ill for some length of time. He will feel weak, sluggish, and languid, with an uncontrollable disposition to gape and stretch; but these symptoms, being common in the commencement of other diseases, cannot with certainty foretell an attack of the fever and ague.

The patient's sense of cold bears no proportion to the actual degree of heat in the body when measured by the thermometer. His sense of cold would indicate that the body was in a freezing state, while it is well known that the actual heat of the body is not lessened but a very little.

The sense of cold, the shaking, and the chattering of the teeth, do not continue long, commonly not more than half an hour,

before a sense of warmth begins to return. The trembling and quivering subside, and, gradually, the whole system becomes flushed with heat. The face becomes red, and the whole surface of the body glows with heat and color. The patient begins to grow thirsty; the head begins to ache; the tongue becomes dry and parched, and a feeling of restlessness possesses the whole body. This state of heat, dryness of the skin, and uneasiness, commonly continues about as long as the state of chilliness and shaking, and is then succeeded by a profuse sweat. The person sweats as profusely as if hard at work in the greatest heat of summer, although he may be actually exposed to the greatest degree of cold. The moisture is first perceptible upon the forehead, and gradually extends downwards over the whole skin. These cold, hot, and sweating stages distinguish the fever and ague from all other kinds of fever.

In the cold stage of fever and ague, the pulse is smaller, weaker, and more irregular, than in a state of health. The pulse ranges from a hundred to a hundred and thirty or forty. The breathing, especially in the cold stage, is short, quick, and difficult, but in the hot stage is less difficult, although still quick and anxious. There is no appetite for food until the sweat has continued to flow for some length of time. As the cold stage comes on, sickness and vomiting often accompany it, and appear to put an end to the chills and shaking. The matter vomited is commonly bilious. Until the sweating comes on, the mouth is dry and clammy, and the saliva ceases to flow. The urine in the cold stage is without color and sediment. It is not a little remarkable that ulcers will sometimes be dried up during the chills of an ague, and recommence the discharge of matter as soon as the perspiration begins to flow. In fever and ague, the mind becomes confused, the recollection difficult, and sometimes delirium will happen.

Most commonly the train of symptoms which we have described occurs every other day, with an interval of comparative health, and sometimes of entire health, for forty-eight hours, until the disease has run its course, or been arrested by the use of medicines. Sometimes the same symptoms will come on every day, and at other times every fourth day. The intervals of comparative health which take place in this disease have given it the name of intermittent fever. The ordinary length of an intermittent fever, where no remedies are used, is about thirty days. Some agues do not run so long, and others will continue six months or a year.

The cause of this remarkable disease is not very well known. It appears, however, to be confined to particular localities or districts. It is common to all new countries, to the shores of lakes, and the banks of large low rivers. This circumstance has originated the idea that the disease is caused by an emanation of some virulent matter from the vegetable, animal, watery, and earthy substances peculiar to such places. But what this peculiar

effluvia, gas, air, or vapor is, has never been ascertained. It occasionally occurs in high lands and airy situations. In the Southern and Western States, and in the vicinity of all our large lakes and rivers, the fever and ague is a common disease. Stagnant waters and extensive marshes, however, are generally looked upon as the breeding spots for this fever.

After ascertaining the particular kind of disease with which we or our friends are afflicted, our most important concern is to know the means which have been discovered of curing or of relieving it.

Remedies for the fever and ague. — The best thing to be done in an ague fit, is to place the patient in a warm bed, put the feet in a tub of hot water, and administer hot drinks, such as penny-royal tea, lemonade, or hot molasses and water. Place a hot brick or piece of board, wrapped in flannel, to the pit of the stomach, and give thirty drops of laudanum, or morphia; if the first dose does not produce warmth and quietude in half an hour, the same dose should be given again. After the first fit of fever and ague has gone off, and another fit is anticipated, the laudanum may be given just before the time of the expected attack. This treatment alone will sometimes cure an ague.

After the hot stage has commenced, all heating things should be laid aside, cool air admitted, and cool drinks given. If the headache should be very great, the pulse full and hard, and the heat of the body excessive, a little blood should be drawn from the arm, or from the temples by the application of leeches. This often prevents local inflammations, and ague-cakes, which form in the liver and spleen, indurations which sometimes eventuate in dropsy, or fatal visceral obstructions. But in ordinary cases, an emetic is the most proper remedy at the commencement of the hot stage. The powder of ipecac. is, of all the substances hitherto discovered, the safest and most uniformly effectual emetic. A common sized tea-spoonful, mixed with molasses or water, is a common dose for an adult. Where this cannot be obtained, thoroughwort may be used. Some may prefer lobelia, which is used in a dose of from ten to twenty grains of the dried, powdered leaves. The preparation, however, of lobelia, which is most in use by the profession in this country, is a tincture made by putting two ounces of the dried leaves into a pint of new rum, or diluted alcohol. A table-spoonful of this preparation is given every quarter of an hour, until puking is produced. Not more than three table-spoonfuls should be given without waiting an hour or two before more is administered. One spoonful will often produce the effect.

In case of pain in the side, or head, or any other part of the body, a blister of a good size should be applied, or fomentations used. After the operation of the emetic is over, two or three pills of aloes should be given, or a dose of oil, salts, or of some other cathartic in domestic use, to free the bowels of bile and other offending matter. Ten grains of the Dover's powder may also be

given to hasten a perspiration, or a tea-spoonful of the sweet spirits of nitre may be given instead of the Dover's powder. Barberry-water is a very suitable drink. But the best drink which can be given to a patient, in the hot stage of fever, is the spirit of mindererus, which is made of the super-carbonate of potash and lemon-juice, or distilled vinegar.

The second and most important thing to be attended to in a fever and ague, is to prevent the return of the paroxysms. If an emetic is given an hour or two previous to the coming on of the chills, it will often prevent their occurrence, and the patient will pass on to the next regular period of the chills; and if another emetic is administered, as before, the chills will be again prevented. Thirty or forty drops of laudanum, given several times in succession, an hour or two before the accession of the chills, will often break up the whole disease, and restore the system to health.

But the remedy the most to be relied upon is the sulphate of quinine, a chemical salt procured from the Peruvian bark. The bark itself was formerly given in this disease, but is now almost entirely superseded by quinine. The quinine is given, in doses of two grains of the powder, once an hour, for five or six hours previous to the chills. A grain of it can be mixed with a little jelly of any kind, and swallowed in this form, or made into a pill. The best way, however, of taking it, is to dissolve sixteen grains of it in two ounces of water acidulated with four drops of sulphuric acid. The water will not dissolve it without the acid. A tea-spoonful is to be taken once an hour during the intervals of the disease. Where the chills occur every day, the quinine should be given every hour; but where they occur every other day, once in two hours will be quite often enough. Care should be taken not to give the quinine until the sweating stage has entirely passed away, and the pulse become soft and quiet. There are several kinds of bark which have some efficacy in curing the fever and ague, besides the Peruvian and the salt extracted from it. The most celebrated are the cascarilla, the gentian, the quassia, and the columbo. Even camomile flowers, wormwood, and bitter herbs in general, have some tendency to arrest this disease.

Neither the bark nor the quinine should be given if any of the organs evince a state of inflammation, otherwise this disease may be converted into a worse one.

A new remedy has within a few years been introduced, called the *piperine*, a chemical principle, discovered in the analysis of black pepper. A grain of the piperine is made into a pill and swallowed once an hour, for five or six hours previous to the accession of the chills. People who can be cured in no other way will often recover by removing from the district where the disease originated. In protracted cases, mineral salts must be used, such as blue vitriol, sulphate of zinc, and mercurial preparations. When ague-cakes form in the liver and spleen, and the abdomen

becomes turgid, calomel in small doses, or the blue pill, will be the only remedies upon which any reliance can be placed.

The diet in a fever and ague should be light and nourishing; food should never be taken into the stomach in a paroxysm of the fever, but when the paroxysms have subsided, broths, soups, boiled chicken, and vegetables, may be freely taken. Mutton, and all meats of easy digestion, may be eaten with moderation. All intoxicating drinks should be studiously avoided; they will invariably retard the cure, where they do not convert the disease into incurable chronic inflammations of the vital organs of the body.

The fever and ague is not, in general, a dangerous disease, if an ordinary degree of prudence is used in the management of it. A person who is disposed to this disease, or who already has it upon him, should always adopt a dress which is calculated to protect him against all great and sudden changes of the weather. He should constantly wear flannel next to the skin, avoid exposures to wet feet and damp air, and as much as possible avail himself of a dry air and a dry situation to live in. Much mischief is done to patients afflicted with this disease by the prescriptions and recommendations of ignorant persons. A strict course of temperance, both in eating and drinking, should be pursued through the whole course of the disease; this, of itself, lays a good foundation for recovery. After a fair trial of quinine, or of the bark in powder, has been made, the other medicines enumerated should be tried. Where the piperine cannot be obtained, eight or ten of the black pepper-corns can be taken, three or four times a day, instead of it.

Should dropsical swellings begin to manifest themselves in different parts of the body, medicines should be taken which have a tendency to operate upon the kidneys and bowels. The calcined magnesia, cream of tartar, and Epsom salts, should be frequently taken to evacuate the bowels and increase the flow of the urine. The mineral acids, particularly elixir vitriol, should be taken as a mild, efficacious tonic. The food should be nourishing, and whenever distress and want of sleep require the use of opiates, they should not be withheld. But where a person has been subject, for a long time, to an annual return of this disease, and the constitution has become greatly enfeebled, he should, as a last hope, quit the district where the disease originated, and locate himself in a soil and climate more congenial to his health.

One of the greatest improvements which has taken place in the treatment of all fevers, is in the free use which is made by the moderns of cold water, both as a drink and as a bath. The ancients were afraid of its use; indeed, they not only looked upon nearly all diseases with some degree of superstitious fear, but upon everything which they administered to the sick. Cold water may be freely used, both as a drink and as a bath, in the hot stage of the intermittent, and of all other fevers. In all cases of high fever and of a dry and hot skin, the greatest relief is experienced

by sponging the body over with cold water. The body may also be showered or wrapped for a while in a cold, wet sheet.

FEVER, CONTINUED — *Slow Fever.* — This fever is particularly a disease of temperate climates, but occasionally of all climates. Wherever man is known, this fever is known; and its symptoms are nearly the same the whole earth over. It is sometimes called *slow fever*, and at other times *nervous fever*.

A person, in an attack of this fever, commonly feels a loss of strength, a loss of appetite, and a loss of mental activity. He realizes a heavy, indescribable, sinking feeling at the pit of the stomach. The head swims, and eyes look dull and heavy. Cold chills sometimes, though not always, run over the whole body, commencing in the back. There is pain in the forehead and sometimes in the back and loins. But the most uniform and remarkable symptom in this disease is the feeling of a sickish oppression in the stomach. The features of the face and the dimensions of the whole body are evidently shrunk. The skin assumes a dusky hue, and is more or less shrivelled. There will be frequent rigors; the urine will be scanty and pale; the tongue and mouth dry, and the breathing short and quick; and the person complains of a universal weariness or tired feeling.

The rigors and the sensations of cold usually continue for a few hours, and are succeeded by flushes of heat and an increase of the headache, sickish feeling in the stomach, and dryness of the skin and tongue. The eyes become red, the face flushed, and the pulse strong, full, and frequent; — it will often beat from ninety to one hundred and twenty strokes in a minute. The thirst will be great; the bowels costive; the blood will rush to the head, and there will be a disposition to vomit. Delirium is no uncommon symptom.

When the fever runs high, and all the symptoms are severe, and continue for a long time, the greatest danger is to be apprehended. The symptoms which foretell death are, a sinking of the pulse; an involuntary discharge of the urine and stools; an increasing coldness of the feet and hands; hiccoughs; starting of the tendons; and the settling of the blood under the nails.

The favorable symptoms are, the return of more quiet sleep; the appearance of a gentle sweat; an abatement of the thirst and heat; the secretion of the saliva; and the disappearance of the fur upon the tongue; and, especially, an increased flow of the urine, which, in cooling and settling, throws down a reddish-colored sediment. But, perhaps, what is more favorable than all, is the appearance of an appetite.

The common continued or slow fever, when it is not cured or shortened by medicines, usually runs from fourteen to thirty days. It will sometimes come to a crisis on the fifth, seventh, or ninth day. The usual length of this fever, in our climate, is about two weeks, or seventeen days, unless it is very severe.

Domestic Remedies. — While the sense of cold lasts, in a continued fever, the drinks should be warm, and warm applications should be made to the skin. Warm pennyroyal or balm tea should

be given plentifully to drink, the patient placed in a warm bed, and the feet well bathed in hot water. A gentle emetic of ipecac., a tea-spoon even full, should be given as soon as the coldness goes off, followed by frequent draughts of warm water. After the effects of the emetic are well over, a dose of some gentle physic should be administered. For this purpose, an ounce of steeped physic, composed of senna, manna, and salts, may be given, or a dose of the Rochelle powders in a state of effervescence. Two or three pills of aloes, or five or six pills of the extract of butternut, will answer, in case the other cathartics cannot be obtained. Where ipecac. cannot be obtained, a tea-spoonful of powdered alum, mixed with molasses or syrup, may be given in its stead, as an emetic. The alum operates very quick and gently. Many people are partial to the use of the lobelia as an emetic. Where this article is used, an ounce of the dried leaves should be steeped in half a pint of water, and only a table-spoonful given at a time, and repeated at intervals of fifteen minutes, until a gentle vomiting has been produced. Not more than four table-spoonfuls should, at the most, be given, without waiting an hour or two for its operation. The caution of giving it at intervals of fifteen or twenty minutes should always be kept in mind. In fever, we prescribe its use simply as an emetic, in a dose which has been sanctioned by the usage of regular physicians in our country. A table-spoonful of the above infusion is a dose for an adult. A tea-spoonful will be a sufficient dose for a child two or three years of age.

The most suitable drinks, in a regular continued fever, are cold water, lemonade, apple-water, tamarind-water, barberry-water, soda-water, and the acetate of ammonia, which last is, perhaps, in addition to its property of quenching the thirst, one of the best febrifuges in the *materia medica*. Cold water, as innocent as it is, and as grateful as it may be, can be given to too great an extent. A well person can drink immoderately of cold water; much more then should we set bounds to its use by the sick.

Sleep is a most desirable and necessary refreshment in fever; and from nothing does a person affected with this fever suffer more than from a loss of it. Opiates, in this fever, are for the most part injurious and powerless. We must, therefore, resort to means which lessen the heat and increase the secretions. Cold bathing should be daily and thoroughly made use of just before the usual time of sleep. A tea-spoonful of the sweet spirits of nitre should be given every hour, for at least three hours before bed-time, or, which perhaps may be preferable, a similar dose of Hoffman's anodyne. The room should be cool and the bed-clothes light.

Blisters in the commencement of a fever are rarely ever productive of much benefit, unless it is very light. The first stage of a fever must have passed over before a blister will be a proper remedy to use. On a return of the appetite, chicken broth, soup, milk porridge, custards, broiled salt pork, salt fish, and toasts of coarse wheat and Indian bread, will afford the most appropriate diet. But, after all that can sometimes be done in a continued fever, the

patient will often have to pass many wearisome days and nights before recovery ; and he can only reconcile himself to the endurance of so much restlessness and misery by the reflection that it is the common lot of humanity.

Professional Remedies. — Bleeding, in a regular continued fever, is in the present day seldom resorted to, unless the heat, thirst, and the force of the circulation, should be very great. Antimonial and saline medicines have been found to be more sure and efficacious. The medicine of the most power in this disease is antimony, either in the form of tartar emetic, or of the *pulvis antimonialis*, or antimonial powder. Antimony moderates the force of the circulation, at the same time that it opens the pores of the skin, increases the secretion of the urine, and loosens the bowels. This medicine has not only stood the test of time, but has increased in reputation in proportion to the extensiveness of its use. It should never be given in doses which shall continue nausea to any length of time. Three grains of the tartar emetic, dissolved in three table-spoonfuls of hot water, and given in a tea-spoonful dose, once in two hours, is perhaps as good a way as any in which the medicine can be administered. The antimonial powder, in eight grain doses, is often preferred, and is nearly as efficacious. The powder may be given in water, syrup, or molasses.

Ipecac., in grain or grain and half doses, has a reputation nearly as high as antimony, as a febrifuge. Used in this way, it often puts an end to fever. It moderates the pulse, produces a perspiration, quiets the nerves and uneasy sensations, and induces sleep ; all which effects appear to be antagonistical to fever. All heating things, in the early stage of the fever, should be studiously avoided, especially stimulating and intoxicating drinks. Wine is hardly ever admissible until the fever has subsided or considerably abated. Bitters and strengthening medicines are also incompatible with this fever in its early stage. But when the fever has continued for some time, and its symptoms are not very severe, the physician need not wait until a complete crisis has been formed, before he makes an attempt to strengthen the system. For this purpose, the quinine is preëminently entitled to the first trial. If it does not increase the heat and oppression at the stomach, but, on the contrary, relieves the restlessness and produces a greater degree of composure and sleep, it may be continued until symptoms of amendment and strength appear. The mineral acids, such as the elixir vitriol and the muriatic acid, are often found more suitable tonics, where any degree of fever remains, than the quinine and the bitter medicines in general. Preparations of iron are seldom used in the debilities of fever, though, where other tonics cannot be procured, or do not agree with the stomach, a trial may be made of them.

Good nursing and proper attention to the wants of the sick of this disease will often work miracles in restoring the patient to health ; while, on the contrary, neglect, and the want of the common comforts of life, often hasten the sufferer to the grave.

In the latter stages of this fever, instead of giving cathartic medi-

cines as often as they may seem to be required, it is much safer and much more saving of the strength to administer injections. For this purpose, a table-spoonful of common salt dissolved in a pint of warm water or molasses and water, is as good a way as any to induce an operation of the bowels. Where nourishment cannot be retained by the stomach, broth, milk, and water gruel, and other nutritive liquids, are often given by injection, mixed with tea, or fifteen drops of laudanum, to secure their stay in the bowels. Patients have sometimes been supported in this way for many days and weeks.

The continued or slow fever is not contagious. It is a disease which originates from a variety of causes; from great exhaustion of the strength of the body or of the mind; from excessive watching and sudden depressions of the mind; from changes of great heat to cold, and the reverse; from exhausting sweats and want of food; and probably from poisonous exhalations from the earth. In New England, the country towns are much more subject to this kind of fever than the cities; the inland towns, and those situated upon the seaboard, and low, flat places, than the hilly districts. In some seasons it is far more prevalent than in others; and in some towns and counties in New England, it almost always prevails in the latter part of summer and the beginning of autumn. Farmers, after having gone through with the fatigues of haying, are apt to be the subjects of it. Their constant exposure to the heat of the mid-summer sun, exhausting sweats, and their excessive labor, all combined, prove too debilitating for the system. They prostrate all the powers of life, and disease is the inevitable consequence.

In addition to what has been said upon continued fever, it may be observed, that this fever is subject to some variations and irregularities, which lead many people to confound it with typhus and remittent or bilious fever. It is true that there will be, at times and particular seasons, so much torpor of the mental faculties, and so much delirium, as to lead inexperienced persons to such a conclusion; but the event commonly proves the conclusion to be fallacious. The stomach also, in this disease, will, in some cases, be loaded with bile, and there will be more or less of a bilious vomiting. Emetics of ipecac., in such cases, will be found singularly efficacious. Where symptoms of debility do not forbid it, an emetic may be given every day, until the stomach has been entirely relieved. In other instances of this fever, there will be almost constantly a bilious diarrhœa, which, in spite of all remedies to allay it, will continue until the fever has come to a crisis. And where the diarrhœa is not very severe, it is not a symptom which calls for very powerful remedies. It is commonly better combated by a few anodyne injections than by potent astringents administered by the mouth. A tea made of the ground logwood is probably the most innocent and surest astringent which can be used. Grain doses of the sulphate of zinc, or of the sugar of lead, either in pill or in solution in water, will sometimes prove more effectual. Small doses

of rhubarb and magnesia often prove effectual where other means fail.

The lungs, in this disease, are sometimes so much affected with a cough and irritation as to give this fever the name of lung fever, but very improperly, as the lungs are not the seat of the disease, and always recover when the fever disappears. When, however, the lungs are more affected than the other organs of the body, local remedies, not incompatible with the general fever, should be employed. Large blisters should be applied to the chest; and, where the strength of the patient will allow of it, a little blood should be drawn by leeches or cupping. The lungs will occasionally be so sensitive in this fever as to require the use of warm drinks and demulcent medicines, such as solution of the slippery-elm bark, gum arabic, and the gum ammoniac.

Twenty or thirty years ago, the slow, continued, or autumnal fever of New England,—for this fever goes under all these names,—was treated almost entirely with calomel. This medicine, in this fever, is now almost entirely gone out of use. We have no doubt but calomel, properly administered, will sometimes cure the continued fever, and oftener relieve it; but, like every other good article in medicine, and every other good thing in this world, it is so much the more liable to abuse. Were it not an effectual remedy in some diseases, we very much doubt whether its use would ever have been pushed to such an unwarrantable extent. The mouth in a burning fever is dry. Calomel will almost invariably increase the secretion of the saliva, and in this way moisten the mouth. The conclusion is certainly a very philosophical one, that calomel is good for the fever. All the secretions in a regular continued fever are checked or dried up. If calomel will increase or promote one secretion, it may promote them all, and so carry off the fever. It is probable that calomel does promote the secretions in general, although its operation is more visible in the mouth and upon the salivary glands. It appears to us to be a general excitant of the secretory system; if the mucous membrane of the bowels is inactive and torpid, we think calomel will excite it to action in the same way that it does the salivary glands; if the liver is inactive and torpid, calomel will excite a flow of the bile; if the kidneys, lungs, or the skin, are inactive and torpid, calomel will excite them to action. In this respect, calomel differs in nothing from antimony, ipecac., and many other articles which promote the secretions in general. Calomel, however, when rightly used, does not, like them, diminish the strength. It is slower, but more permanent in its effects. In a word, calomel is a good servant, but a hard master.

FEVER-ROOT—*Triosteum Perfoliatum*.—This plant is to be found in all parts of the Union, but nowhere in great abundance. It grows from one to four feet high. It is sometimes called *wild ipecac*. Its flowers are of a dull, brownish purple; and its fruit an oval berry, of a deep orange color, hairy, and somewhat

three-sided. The flower-cup contains three cells, and three hard, bony, furrowed seeds.

The properties of the fever-root are emetic and cathartic. In places where medicines are not easily obtained, the fever-root may be found a good substitute for ipecac. and jalap. The dose of the dry, powdered root, is from twenty to twenty-five grains. Dr. Bigelow thinks it easily impaired by age. The fever-root has a nauseous taste, and smell, like ipecac. It is a newly discovered plant, and needs more trials.

FIBRINE. — The substance of which the flesh is chiefly composed. It is a proximate principle of animal matter; that is, in passing from the blood, which contains an abundance of it, into the form of flesh, it necessarily undergoes no change. All that the coagulum of the blood differs from the flesh consists in a certain form which the same matter assumes in different situations. If closely examined, the coagulum of the blood will be found to present the same fibrous appearance displayed by the flesh or muscles. If blood, as it issues from a vein, be beaten with a stick, the fibrine will adhere to the stick in the form of long, reddish strings, which, when washed, become transparent. It is easy to comprehend, therefore, that this matter in the blood is a principle next in the series of changes to flesh itself, and that the flesh may be said to be almost ready formed in the blood.

Fibrine is contained in the matter of vegetables as well as of animals. All the properties of vegetable fibrine and animal fibrine are the same. One of the constituents of animal matter, therefore, is formed in the process of vegetation, and furnished to the stomachs of those animals which live on flesh, in a state ready to be carried into the blood. In the process of digestion, it probably undergoes no other change than a disengagement from extraneous matters. Thus we see that vegetables produce in their growth one of the constituents of the blood of animals. Indeed, vegetables produce all the constituents of blood and flesh, since vegetable albumen, caseine, and fibrine, are identically the same with animal albumen, caseine, and fibrine.

Fibrine is convertible into albumen, and albumen into fibrine; their chemical elements are the same in number, kind, and quality. Fibrine contains, in round numbers, fifty-three parts of carbon or charcoal, six parts of hydrogen, fifteen parts of nitrogen, and twenty-three parts of oxygen, with a small quantity of sulphur and phosphorus. Albumen and caseine contain the same elements or ultimate principles.

A new principle has lately been discovered, called *protéine*, which is the base of fibrine, albumen, and caseine, both vegetable and animal. From this newly discovered element, all animal matter is supposed to be formed, with the aid of the oxygen of the air and water. Protéine is found in the fibrine of wheat flour.

Animal fibrine, albumen, and caseine are compounds of protéine. All these principles contain nitrogen, and are called the nitrogenized constituents of animal matter.

FIBULA.—The outer bone of the leg, extending from the knee to the ankle. Its mate is the tibia, or shin-bone.

FISTULA IN ANO.—This disease is an abscess, or a maturing cavity, formed about the verge of the anus. An inflammatory tumor forms in or near the rectum, or lower portion of the bowels, suppurates, and leaves an opening which constantly discharges an unhealthy, watery matter. This opening will sometimes be made through the bowel, so as to let the watery contents of the bowels through it. In other instances, the tumor will burst outwards, and not extend to the bowel; but the suppuration will extend so far as to render the coats of the bowel thinner, and forbid the healing of the abscess, without laying the fistula and the rectum into one opening, with the bistoury. In the third place, the fistulous tumor will burst into the rectum. In this case, there is a kind of a sac formed, which will be filled and distended outwards every time the person goes to stool.

The fistula generally commences with a hard, circumscribed, red, painful bunch or tumor, very near the fundament. It will often create a high fever, quick, forcible pulse, and extreme pain, especially when the contents of the bowels are discharged. In this case, it will be necessary to let blood, either by opening a vein, or by leeches, the latter always being preferable where they can be conveniently obtained. The swelling or swellings,—for sometimes there are two or three at a time,—must be poulticed and fomented, to bring them to suppuration.

When the tumors first appear, however, we must always try to disperse them by the use of lead-water, or a solution of the white vitriol. The bowels must be drained by mild cathartics, such as the cream of tartar, the flowers of sulphur, or, which is better than either, the lenitive electuary. The butternut pills are scarcely inferior to either of the others. A perspiration must be raised by the use of small doses of ipecac., or antimony, assisted by warm herb teas. Eight grains of the sal nitre, every two hours, will assist greatly in the reduction of the fever.

As soon as the matter is fully formed in the tumor, which often resembles a black boil, it must be let out with the lancet. The opening must be large, to prevent the formation of more matter. In some instances, the abscess will be flat and not well defined; these are the worst cases, and the least likely to heal.

There are a great many boils and tumors, however, which form about the extremity of the rectum, which inflame, suppurate, and discharge their matter, and heal as well as the same kind of abscesses in other places. Probably not one in a hundred of these tumors ends in a genuine fistula.

In all kinds of suppurative tumors in the rectum, we have always placed great reliance upon the daily use of the lenitive electuary, taken internally, and the Turner's cerate for an external application. These two articles are so efficacious, that they have often been vended, for the cure of the piles, and other tumors, as specifics. The fistula often results from piles, a consideration

which makes it of the highest importance to accomplish a cure of that annoying complaint in its commencement. After the fistula is once formed, there is no other way than to lay it freely open; and if there are several, they must all be opened into one. If properly treated, the fistula is not the desperate disease which it is commonly supposed to be.

FISTULA LACHRYMALIS.—There is a small duct leading from the inner corner of each eye, through which the tears and mucus are conveyed into the nose. This duct sometimes inflames and ulcerates. The passage becomes closed, or nearly closed, and an opening is made by ulceration from the sac, or belly of the duct, through the cheek, from which the tears and mucus now flow. This opening is called a fistula. In the beginning of this affection the tears are constantly running over the cheeks.

If only one of the puncta is closed, it may be opened with a pin; but if a fistulous opening has been formed, the difficulty can only be remedied by establishing a new passage, by means of a silver tube, inserted into the obstructed duct, for the conveyance of the tears. There is always more or less redness, soreness, and swelling of the inner corner of the eye, and formation of matter.

FLAG, BLUE.—See *Blue Flag*.

FLATULENCY.—Wind in the stomach and bowels. Flatulency is one of the symptoms of dyspepsia. The quantity of wind or gas which is often let loose in the stomach and bowels is enormous. The pain and distention which the wind in the digestive tube produces seem to show that it is different from common air. It is probably much more elastic and diffusive. Some of it appears to be the sulphuretted hydrogen gas. The remedies adapted to the relief and cure of flatulency will be found under the head of dyspepsia.

FLESH—The Muscles.—A person may be fleshy without being fat, and fat without being fleshy. If the muscles are large and full, the body will be round and handsome. Health, good air, and good living, increase the size of the muscles, or the amount of flesh, as well as the amount of fat. Exercise increases the amount of flesh, or the size of the muscles, where a plenty of food is supplied, but diminishes the fat. Exercise, *without a sufficiency of food*, diminishes the size of the muscles, as well as the fat. To be fleshy is always desirable, as it increases the strength and improves personal beauty; to be fat is inconvenient, if not uncomely. To be fleshy, therefore, without being fat, a person has only to exercise enough, and to eat enough. This is an important distinction, which should be carried in the mind of every one who wishes to be strong, healthy, and handsome.

It is also an important consideration in the raising of domestic animals. To increase the size and strength of animals, the muscles and bones must be enlarged. To accomplish this purpose, the animals must not only be well fed, but moderately worked, or left to run at large in pastures, that the blood may be propelled into all parts of their bodies.

FLOWERS OF BENZOIN.—Benzoic Acid.—This substance consists of white brilliant scales, or flakes, like small flakes of snow. It is obtained by sublimation from the balsam called ben-zoin. It has a pleasant taste and a fragrant smell. It dissolves in alcohol and hot water. It is one of the ingredients of paregoric. The crystals or flakes, taken in a dose of ten or fifteen grains, have been esteemed an excellent pectoral or cough medicine. We think it deserves more attention as a remedy in lung affections than has commonly been given to it.

FLUOR ALBUS.—A disease peculiar to females. It is a chronic affection of the uterus and vagina, denoted by a secretion of whitish or milklike mucus. See *Whites*.

FŒTUS.—The beginning of the child in the womb is involved in great obscurity. Existence is supposed to commence in the ovaria,—two small organs, each about the size of the Lima bean, connected with the fundus of the uterus by two small ducts or tubes, called the Fallopian tubes. At the end of three weeks after impregnation, a small gelatinous body becomes perceptible in the womb, but it is without organism or form. About the fourth week, a red spot is seen in this mass, which gradually expands, and forms the heart and blood-vessels of the fœtus. In another week, the head, eyes, mouth, face, and ears, become developed. But it is not until the middle of the fourth month that the embryo becomes completely formed, and ten weeks later before the new being has acquired maturity enough to live. At seven months, children will often live, although the birth is premature.

The circulation of the blood in the fœtus, or in the fœtal state, is different from what it is after birth. The blood, in this state, comes from the mother, by means of the placenta—a new medium of communication, established for the purpose of nourishing the child. The funis or navel-string of the child, which arises from the placenta, encloses a vein and two arteries. The vein carries the blood from the mother to the child, and the two arteries from the child back to the mother. Thus the blood which nourishes the child in the womb enters at the navel. The vein which conducts it passes through the liver, leaving a branch to nourish that organ, and enters the vena cava, or great vein, which goes to the heart. But when the blood has reached the heart of the fœtus, instead of being propelled from the right auricle to the right ventricle, and through the lungs or lights to the left auricle and ventricle, as is the case after birth, the greater part of it passes immediately from the right to the left auricle, through an orifice called foramen ovale, which, after birth, closes up. The rest of the fœtal blood, after passing through the right ventricle, goes in part to nourish the lungs, and in part through the pulmonary artery, which, at this stage of existence, terminates immediately in the aorta, under the name of the ductus arteriosus. In the fœtus, the arteries which return the blood through the cord and navel arise from the internal iliacs.

The child in the womb is covered by two membranes, or a

double membrane, which, after birth, is called the veil. This double membrane contains, besides the child, a large quantity of water in which the fœtus is immersed. The rupture of this membrane or bag is sure to produce the loss of the child, or a miscarriage.

Thus we see that the fœtus is nourished by blood alone. Neither hunger nor thirst is felt till after birth; breathing is not necessary; and the external senses, with the exception of that of feeling, are incapable of action.

FOMENTATION.—The bathing of a part of the body by means of flannels dipped in hot, medicated, or simple liquids. Various kinds of herbs, such as pennyroyal, spearmint, tanzey, and hemlock, as well as simple hot or warm water, are used for fomentations. It is equivalent to steaming the part.

FOOD.—The food of mankind consists of animal and vegetable substances. Every species of vegetable or animal matter which can be digested and converted into chyle will support the body. The digestibility of substances must be determined entirely by experience and observation. Animal substances, being composed of the identical matter of the human body, contain more nutriment, in the same compass, than vegetable food. Vegetable substances may be considered the raw materials out of which the blood is made, and animal matter the manufactured article. While animal matter only undergoes, in the digestive organs, a kind of solution, or a separation into the proximate principles of living human bodies, vegetable substances are obliged to undergo decomposition, or chemical analysis, to a greater or less extent.

The most common articles of food among the people of New England are the mealy or farinaceous substances, such as Indian corn, rye, wheat, barley, buckwheat, potatoes, rice, peas, and beans, with some others. All these articles are healthy and nutritious; they contain, in great abundance, proximate principles of animal matter, viz., fibrine, gelatine, and albumen. It should be particularly recollected that *fibrine*, the substance of which all the fibrous parts of the body are composed, *albumen*, which is contained in the watery part of the blood, and *gelatine*, which composes the membranes of the body, and exists in great abundance in the bones, tendons, and other parts of the system, are all found ready formed in vegetable substances, and probably do not undergo an entire chemical change in their conversion into living animal matter. Caseine, a fourth proximate principle of animal matter, and which is contained in milk, is also found in vegetables, such as peas, beans, and other milky seeds. So far as chemical discoveries go, therefore, it would seem that the system may be nourished as well by vegetable as animal food, as the proximate principles of blood are contained in both.

It is a remarkable fact, that vegetable fibrine, albumen, and caseine are all composed of the same chemical elements with animal fibrine, albumen, and caseine, viz., carbon, hydrogen, nitrogen, and oxygen, with a trace of sulphur; and that in a hundred

parts of each of these proximate principles, there are fifty-four parts of carbon, seven of hydrogen, fifteen of nitrogen, and twenty-two of oxygen, with a few fractions added to each part.

Caseine composes our food while we subsist on milk. Gelatine, another proximate principle of digestible matter, is composed of the same chemical elements as fibrine, albumen, and caseine, but not of the same proportions. In a hundred parts of gelatine there are fifty parts of carbon or charcoal, six parts of hydrogen, eighteen parts of nitrogen, and twenty-three parts of oxygen. It is extremely doubtful whether we could subsist entirely upon gelatine, but it is demonstrated that we can live either upon fibrine, albumen, or caseine. The brain, nerves, and the eggs of fowls, are chiefly composed of albumen. This substance, as we have said in the definition of albumen, is exemplified in the white of an egg.

The animal substances used by the people of New England are beef, pork, poultry, fish, mutton, veal, milk, wild birds, and a small proportion of wild game, such as rabbits, squirrels, raccoons, woodchucks, bears, and deer. These substances are rich in animal fibrine, albumen, gelatine, and caseine.

It may here be noticed that the blood contains the same ultimate or chemical principles as the flesh. Each is composed of fifty-one parts of carbon or charcoal, seven parts of hydrogen, fifteen of nitrogen, twenty-two of oxygen, and four of ashes. In living on flesh, it is probable that our food, in the process of digestion, undergoes merely a solution, and not a chemical change, nor a change into its ultimate principles and a re-combination of the same.

Whether animal or vegetable food is best adapted to the health and longevity of man, is a question which remains to be settled by observation and experiment, or a more perfect history of the dietary habits of mankind. The health and the longevity of the people of New England, particularly in the country towns, are not probably surpassed by the inhabitants of any other part of the world. Their food consists of a mixture of animal and vegetable substances, in which, we should say, the vegetable part considerably predominated, especially among the female and juvenile portion of the people. The children of New England may be said in the main to be brought up upon bread and milk. In all the country towns, brown bread, or rye and Indian meal bread, and milk, hasty-pudding and milk, milk porridge, bread and butter, bread and cheese, with pumpkin, apple, and minced pies, are the common and the standing food of children. Fruit, apples, pears, peaches, strawberries, whortleberries, currants, and grapes, together with potatoes, turnips, cabbages, beets, carrots, and squashes, make up the rest. The farmers and mechanics, the working class of people, live principally upon the same kind of vegetables, with the addition of salted beef, pork, and fish, with occasional dishes of fresh meat and poultry.

Whether any essential change can be made in this system of living for the better, must be decided by further observation and

experience. We think, however, that the use of meat may safely be restricted to one moderate meal a day. Even the laborious, it appears to us, will do better to use this moderation, and sedentary and inactive people had better use a still greater moderation, or, they may live entirely upon vegetable substances.

We wish here to recommend one remark to the particular attention of our readers. The human stomach is very much like the roots of a tree. If it has been long accustomed to a particular course of living, or, to speak figuratively, been naturalized to certain substances, which must be considered its soil, there is some danger in a sudden change to another course, in the same manner as it endangers a tree to transplant it into a new and untried soil.

It would seem to us that blood wrought immediately out of vegetable substances, or the raw materials, as we have before expressed it, was better calculated to withstand decomposition, or the agents of decomposition, than blood wrought from the flesh of animals; but everything of this nature must be determined by observation and experience. Analogy is fit to be followed only where better evidence cannot be obtained.

It is an established principle in medicine, and perhaps there is no one more fully and irrefutably established, than that a vegetable diet prevents the inflammatory diathesis, or state of the body which disposes it to inflammation. In all acute inflammatory diseases, a vegetable diet is one of the preliminary means of checking and reducing the inflammation. Is not, therefore, a vegetable diet, or the use of vegetable food, a preventive, in a measure, of inflammatory affections? Many people live where no vegetables can grow, which proves that they can subsist upon animal food, but we know but little or nothing of their diseases, or the length of their lives.

We wish here to record, or rather to repeat, an observation which should be borne in mind in every condition of life. The food of a domestic animal which labors must always be in proportion to the quantity of work performed, or the animal will become thin, weak, and emaciated. So with man — the quantity of his food must always be greater in proportion to the amount of exercise which he takes, or labor which he performs. Many people become thin and weak merely from a deficiency of nourishment.

No care can be too great in selecting wholesome articles of diet. Damaged grain or meat ought never to be eaten, much less sold to those who are ignorant of its qualities. Those who have the charge and supervision of public institutions, such as poor-houses, asylums, and hospitals, should always be those whom the community, and even the unfortunate themselves, can trust in providing wholesome and unadulterated articles of food.

FORAMEN. — A little hole or opening in bones, muscles, and membranes, through which a nerve or some other matter passes.

FOXGLOVE — *Digitalis Purpurea*. — The leaves of the fox-

glove are one of the most powerful articles in the materia medica. It is not native to our soil, but has been transplanted from Europe into many of our gardens. The leaves have a nauseous, bitter taste, with considerable acrimony. It grows to the height of about two feet, and bears a beautiful purple blossom. It is cultivated as an ornamental plant. The whole plant is powerfully narcotic, but the leaves possess the most strength. It also possesses the property of reducing the force of the circulation, and of increasing the secretions, especially that of the kidneys. Administered in a proper quantity, it has been known to reduce the pulse from seventy beats to forty or thirty-five in a minute. An over dose produces vertigo, dimness of sight, nausea, faintness, and sometimes death. A medium dose is half a grain of the powder, taken twice a day. But the ordinary way of using it is in tincture, which is made by adding one ounce of the dried leaves to eight ounces of new rum or diluted alcohol, and allowing it to stand for a week, and then straining it. The dose of the tincture is ten drops. It should never be given at first more than twice a day, and it is much the safest way to administer it only once. If too frequently given, its action is liable to accumulate in the system, and to produce some sudden, unexpected effect. In the dropsy it is a powerful and effectual medicine. In hemorrhages from the lungs, nose, and womb, it has been thought equally efficient. It is often given in inflammatory diseases, to reduce the pulse and to answer the intention of blood-letting. Asthma has been relieved by it. Its first effect is supposed to be stimulating. It should be used only by an experienced physician.

FRÆNUM. — The little fleshy string or membrane which ties the tongue to the floor of the mouth. It is sometimes so short and wide as to prevent the child both from nursing and speaking. The child is then said to be *tongue-tied*. In this case it must be cut with a pair of scissors, or a sharp-pointed bistoury. Where it only produces a lisping in the speech it is best to divide or cut it.

FRACTURES OR BROKEN BONES. — It is in simple fractures only, where the bones are broken without wounding the flesh or bursting the blood-vessels, that people in general can do much towards setting them.

In the fractures of bones, with wounds of the flesh, the first thing to be done is to stop the bleeding, if there is any, and to place the patient in a comfortable situation. If there is faintness, a little wine, rum, camphor, or ether may be given; but as soon as the faintness passes off, thirty or forty drops of laudanum or morphine should be given in a little water; and if the limb is jammed or broken into several pieces, two or three tea-spoonfuls of laudanum should be poured upon the bruised flesh. In all cases where the flesh is torn, jammed, or ground to pieces, laudanum or opium dissolved in warm water should be poured into the wound; this prevents the lock-jaw, and eases the pain. The patient should be kept under the influence of laudanum or morphine until symptoms of adhesive inflammation commence.

Broken bones are set very much in the same way that dislocations are reduced,—by extension, and by putting the bones into their right position.

When a bone is broken, the breach can commonly be detected by an examination with the hands; the broken ends can be felt; and in rolling or twisting the limb, while one part is held still, a grating noise will be heard. Most commonly, too, the fractured limb will either be longer or shorter than the sound one, and thrown into an unnatural position. In some cases the limb will bend at the broken place, simply by lifting up one extremity of it.

In setting bones, a bone of the arm or leg for instance, one or more persons take hold of the limb above the fracture, and one or two others below the fracture; they then pull or extend the limb in the direction which is natural to it, while the operator places his hands upon the broken ends of the bones, and matches them together, as soon as the muscles are sufficiently stretched to allow the ends to meet. The extension should be slow, steady, and firm; no sudden pulls will ever succeed. The extension should be made in the direction of the lower fragment. In thin people bones are much more easily set than in fleshy ones.

In fractures where the vessels and flesh are wounded, and the bones splintered, the bones must be set before the wound is dressed.

After the bone is set, the patient must be placed upon a bed or mattress, with the limb resting in a favorable position to recover; a bandage must be placed around it, and two or more splints, made either of wood, leather, or pasteboard. The many-tailed bandage is the most convenient, and splints of leather or pasteboard, wetted when first put on, the most comfortable. Leather and pasteboard splints, after they become dry, assume the shape of the limb and offer but little impediment to the circulation of the blood.

The limb should be kept entirely still; and no purgative should be given, if it can be helped, until the bones have united, on account of the motion which the patient is obliged to make. The diet must be vegetable for the first week, and consist principally of fluids, such as good rice porridge, and bread-water. In case there is considerable inflammation, the ordinary means adapted to moderate it must be employed.

The local applications suitable for broken bones are new rum, vinegar and water, lead-water, a solution of sal ammoniac, spirits of camphor, poultices, and warm fomentations.

In simple fractures of small bones, where there is not much swelling and heat, a plaster of diachylon may be applied to the part.

The time which it takes for bones to unite is from three or four weeks to as many months, according to the size of the bone and the nature of the fracture.

The art of setting bones depends upon the presence of mind of

the operator, his habit of observation, and the number of cases which happen to fall in his way. The art is perfected by a knowledge of anatomy, physiology, and surgery in general.

The great object in bone-setting is to bring the ends of the bones in contact, and to restore the limb or member to its natural shape.

In setting the bones of the nose, you have only to introduce a silver probe, or a stiff instrument a little crooked, into the nostrils, and to lift the bridge of the nose into its proper place. If the arch requires support, you must introduce lint.

In setting the collar-bone or clavicle, you have only to stretch the arms and shoulders backwards as far as is necessary, and the ends of the bone will slip into their place. The part should be covered with adhesive plaster, and a bandage should be drawn over one shoulder, and brought down under the opposite arm, and round on to the back, to meet the other end of the bandage.

In a fracture of the breast-bone or sternum, not much is to be done, unless a part of the bone is depressed, when the trephine must be used, in order to afford a purchase for raising the portion of bone which has been driven in.

There is as little getting hold of the ribs to set them as of the breast-bone, when they are broken. The fracture of one rib is productive of little or no mischief. It is usual to cover the part with an adhesive plaster. A fracture of the ribs is, generally, pretty easily detected by the grating sound made by the broken edges of the bones in the act of breathing.

If the shoulder-blade is broken, all that can be done is to keep the arm at rest, or, at most, to place a thick cushion in the armpit and raise the arm with a sling.

Blood-letting is sometimes required before the bones can be set, especially in dislocations and fractures of the large joints and bones, such as the shoulder and the thigh. Bleeding relaxes the muscles, and lessens the pain of the operation, as well as secures the system against a violent inflammation of the part. After the bones are set, and the wounds, if there are any, are dressed, the patient must pursue a dietetic course, for four or five days, to prevent the danger of inflammation. In the process of healing or uniting of the bones, the diet may be more nourishing, but not rich. Broths, soups, bread and milk, and plain boiled dishes, are the best and the safest kinds of food. No wine should be drank, unless the constitution is weak, feeble, or diseased. The more perfect the rest of the limb or member, after being set, the quicker will be the process of reuniting, and the less the danger of having a crooked bone or a stiff joint.

The art of bone-setting is far behind the other branches of surgery, and requires an additional degree of attention by medical pupils.

FRAMBOSIA — Yaws. — A disease which resembles the raspberry. See *Yaws*.

FROG — Ranula. — A swelling or tumor under the tongue.

which causes the person in speaking to make a croaking, thick noise, like a frog. The contents of the tumor are various, resembling, in different cases, the saliva, the synovial juice, or a fatty kind of matter. Those which we have seen resemble little transparent bags of water, or serous fluid. They may either be opened when they become troublesome, or allowed to burst of themselves.

FUNGUS HEMATODES—Rose Cancer. — See *Cancer*.

G.

GALBANUM. — A gum, which, like the gum of a peach-tree, oozes from cracks and incisions in the stems of a peculiar, perennial plant growing in Africa.

This gum easily melts by heat, and is soluble in alcohol. It has a bitterish, acrid taste, and a peculiar strong smell. It is ranked among the fetid gums. In nervous and spasmodic diseases it is a good medicine. The dose is from ten grains to a drachm. It is more efficacious in the form of a plaster. For rheumatic and white swellings, plasters of it have been found of signal benefit. It is sometimes applied externally in the form of tincture.

GALL STONES. — Biliary concretions found in the gall-bladder. They consist of hardened or inspissated bile. They are found in the gall-bladder from the size of a pea to that of a robin's egg. They are one cause of the jaundice, and the passage of them into the intestines is attended with extreme pain.

GALVANISM. — The galvanic fluid is similar to that of electricity. It is excited, however, in a different way. To produce galvanism, you have only to lay a half or a quarter of a dollar upon the table, and a piece of wet woollen cloth upon it, and then upon the cloth a piece of zinc plate, about the size of the silver piece; then to lay on another silver piece, and upon this another piece of wet cloth, and upon the cloth another piece of zinc, and so on till you have piled up about twenty pieces of each. The pieces of cloth should be smaller than the metallic pieces, and squeezed a little to prevent the moisture from getting between the pieces of metal. If the pile requires support, it must be done by three glass rods confined perpendicularly around it. If one hand is now applied to the top and the other to the bottom of the pile, a shock will be produced, resembling a shock of electricity. The galvanic fluid can be excited in many other ways, but this is the simplest and most practicable. The method now followed is the action of the galvanic trough, composed of plates of zinc and copper, with cells interposed, containing either an acid liquor, or a solution of common salt, muriate of ammonia, or sal nitre.

The electric and the galvanic fluids are supposed by many, to

be one and the same power. Galvanism produces a shock, emits light, excites the most intense heat, ignites combustible bodies, melts crystals, and decomposes the alkalies and metallic bodies. Its most extraordinary influence, however, is upon the muscular and nervous systems of animals. It moves the muscles and excites the nerves of dead people, and animals, very much like the principle of life itself. If the eighth pair of nerves (the branch which goes to the stomach) be divided in animals, the process of digestion ceases; but if the galvanic fluid be applied to the end of the divided nerve next to the stomach, the process of digestion is reëstablished, and goes on by the influence of the galvanic fluid, the same as if the stomach were connected with the brain. When a dead body is galvanized, the legs and arms are thrown about, the face and eyes move, the breathing is excited, and the whole system is affected with convulsions, very much as in a fit of epilepsy. The countenance expresses horror and despair, and exhibits the most frightful contortions. Are the muscular and the secretory motions performed by this influence?

In nervous affections, such as apoplexy, palsy, epilepsy, and debility, galvanism has been found of signal benefit. It is an agent which is destined to become of great utility in the cure of diseases.

GAMBOGE.—The gamboge is a gum-resin, of a deep yellow color, and purges the stomach and bowels powerfully. It is the juice of a tree which grows in the east, and hardens into a solid mass. Combined with jalap, calomel, cream of tartar, and other cathartics, it has been found very effectual in dropsies. When taken alone, the dose is from ten to fifteen grains. It is one of the most drastic purgatives in use, but a very good medicine in skilful hands. It has succeeded in the expulsion of the tape-worm.

GANGLION.—A knot-like enlargement in the course of a nerve. The most notable ganglions are the solar and semilunar, situated near the centre of the abdomen. Also, a tumor in the sheath of a tendon.

GANGRENE.—Mortification.—See *Mortification*.

GARGLE.—Washes for the throat and mouth.

GAS.—Gas is an elemental air. The common air which we breathe, as light, transparent and invisible as it is, is composed of no less than three different gases, oxygen, nitrogen, and carbonic acid. Water is composed of two gases, oxygen and hydrogen. The hydrogen gas is the lightest substance known; it is fourteen times lighter than the atmospheric air. Its lightness enables it to rise with great force above the common air; it is the gas with which balloons are filled. It burns like oil, and is hence called the inflammable air. Gas was first discovered by Dr. Black, of Edinburgh. He obtained the carbonic acid gas from marble, by pouring upon it oil of vitriol in a glass retort. The gas flew off, and, by means of a leaden tube, was collected into a glass bottle, or jar, filled with water and inverted over a tub of water. As the

gas passed into the jar, the water was pressed out. This is one of the greatest philosophical discoveries which has ever been made.

Almost the only medical use which is made of the gases is to inhale them in diseases of debility and of the lungs. The carbonic acid gas is, however, drank in the form of soda-water, and applied to mortified parts in the form of yeast. We anticipate great improvements in the administration of gases in diseases of the lights.

Since our first edition was published, the inhalation of the vapor of ether, under the name of Letheon, has been employed by Drs. C. T. Jackson and Morton, of Boston, to produce a state of stupor and insensibility during surgical operations.

GASTRITIS—Inflammation of the Stomach.—See *Inflammation of the Stomach*.

GELATINE—Jelly.—A good example of this animal substance is the calves-foot jelly. When cooled, it is elastic, tremulous, and quite solid; but, if heated again, it melts and becomes fluid. In this it differs from albumen, which becomes consistent by heat. Gelatine is one of the proximate principles of animal bodies. The skins of animals are almost entirely composed of it. The principle of tanning converts it into leather. The membranes are, also, chiefly composed of it. It is not a compound of proteine, like fibrine, caseine, and albumen, although derived from it. It is found in vegetable as well as animal substances. Gelatine is composed of fifty parts of carbon, seven parts of hydrogen, eighteen parts of nitrogen, and twenty-three parts of oxygen. A thorough knowledge of the proximate principles of animal bodies will throw great light upon the healing art.

GLAND.—Those organs of the body which secrete a peculiar kind of fluid, such as the liver, the pancreas, and the female breasts. Some of the glands secrete mucus, others saliva, others lymph or water, and others wax, as those of the ear. A gland is composed or formed of blood-vessels, nerves, parenchyma, and an excretory duct by which the substance secreted is evacuated.

GLAUBER'S SALT—Sulphate of Soda.—It is obtained from the bittern which remains after the crystallization of common salt. In a dose of half an ounce, dissolved in water, it is a mild, safe, and thorough cathartic, but latterly is not so much used as the Epsom salt.

GLEET.—This affection consists of a discharge of a thin, whitish, whey-like matter, from the urethra of the male and the vagina of the female. It may be a symptom of several different affections of the genital organs, but is most frequently a consequence of gonorrhœa or clap. It, in fact, is a remnant of that disease. It is unattended with pain or scalding, and is but slightly, if at all, infectious, except when aggravated by intemperance in eating and drinking, or other excesses. As it is, in some cases, a matter of considerable importance to know whether this

affection is infectious or not, it may be taken as a general rule, that, whatever the original cause of the disease may have been, if the matter discharged be thick and of a yellowish color, and especially if there be tenderness or irritation in the urethral passage, there will be a great probability that it may be communicated to another person; but if the matter be nearly colorless and thin, and there be no symptoms of inflammation or irritation, it will be equally probable that the case is not infectious. The discharge is furnished by the mucous membrane lining the passage, which has been weakened and deranged in its functions by long-continued disease. Gleet often coëxists with, and may be caused by, strictures and ulcerations in the urethra. The cure of a confirmed gleet is often tedious and difficult, and the effects of remedies, in order to be successful, require to be aided by temperance, abstemiousness in diet, and regular habits, cold bathing, and the greatest attention to cleanliness.

Cubebs and alum, in doses of twenty grains of the former, and ten of the latter, taken three times a day, are sometimes beneficial. Balsam of copaiva, and oil of cubebs, in doses of fifteen drops of the balsam and five of the oil, two or three times a day, are also sometimes successful. Another remedy of considerable efficacy is a mixture of two parts of good spirits of nitre with one part of spirits of turpentine, taken in doses of thirty or forty drops, three times a day, in sugar and water.

Perhaps, however, there is no general remedy upon which so much reliance can be placed, as a mixture of equal parts of the tincture of muriate of iron and tincture of Spanish flies. Twenty drops may be taken, three times a day, in half a tumblerful of upland cranberry tea, or sweetened water, until it produces a slight strangury, or irritation in the bladder, when it should be discontinued for a while, and resumed after the strangury has subsided, if the complaint be not cured.

As the gleet is a local weakness, dependent upon chronic inflammation of the mucous membrane, local remedies, or those applied directly to the part, will not only be found serviceable, but absolutely essential to the cure. Indeed, injections are the principal remedies used by many physicians. Among the substances employed for this purpose, some of the best and most common are the white and blue vitriol, sugar of lead, alum, lunar caustic, and corrosive sublimate. An infusion of nutgalls, white oak bark, and other vegetable astringents, are sometimes used. Perhaps one of the best injections, and one which has been universally approved, is made by dissolving twenty grains of white vitriol in half a pint of rain-water. The addition of a little finely pulverized Armenian bole is believed by some to increase its virtues. The proportion of lunar caustic is from eight to sixteen grains to a half pint of soft water; of blue vitriol the same, and of corrosive sublimate from one to two grains to the same quantity of water. Injections require to be repeated frequently, that is, from four to six times daily, in order to produce any permanent

good effect. If much smarting or irritation be produced, the strength of the solution must be diminished; and if no sensible effect be felt, it must be gradually increased. When gleet is complicated with strictures or ulcerations in the urethra, the use of bougies and caustics, applied directly to the seat of the difficulty, must be resorted to; in which case, and, in fact, in all difficult cases of this nature, the patient should put himself under the care of a skilful physician.

GLOTTIS.—The upper part of the windpipe.

GOITRE—Brouchocele.—An enlargement of the fore part of the neck. See *Brouchocele*.

GOLD.—This precious metal has often been used as one of the materials of medicine. It has been applied principally to the cure of venereal and glandular or lymphatic complaints. It is used in its simple state in the form of powder, in oxide, nitro-muriate, chloride, prussiate or cyanuret, and iodide.

The most common form is the chloride. This is formed by dissolving one part of gold-leaf in three parts of aqua regia, —nitro-muriatic acid,—by the heat of a sand bath, and evaporating to dryness. The chloride consists of a crystalline mass in the form of a multitude of beautiful yellow needles. Its taste is styptic, acid, and disagreeable. It is soluble in water, and when the acid is in excess, attracts moisture from the air. The dose is from one sixteenth to one twelfth of a grain, made into a pill with the extract of liquorice and simple syrup, or mucilage of gum arabic.

The nitro-muriate of gold has been applied with success to the cure of cancers. Six grains of the chloride of gold, dissolved in one ounce of nitro-muriatic acid, forms a caustic wash, which may be applied to the cancerous part until a whitish scab or crust is formed. In three or four days the scab comes off, when, if necessary, it may be applied again.

GONORRHEA—Clap.—See that article.

GOOSE GRASS—Cleavers—Galium Aparine.—This is an annual plant, growing in low uncultivated ground, and by the side of brooks. It is a slender vine, which clings to the bushes by means of prickly points with which the stem and leaves are armed. It has a slightly bitter, herbaceous, and somewhat unpleasant taste. The fresh herb, prepared in the form of an ointment, or decoction, has been considered a good application to scrofulous swellings, and it has also been highly praised as a remedy in scurvy and congestion of the spleen. But it is in dropsical affections, and particularly anasarca, or dropsy of the limbs, that we have most frequently witnessed its remedial virtues. We have long been in the habit of prescribing it as an adjuvant in this affection, and have seen several cases yield to its influence in the most prompt and satisfactory manner. It appears to be decidedly diuretic, slightly aperient, and refrigerant. The best mode of administering it is that of an infusion, made by steeping an ounce of the herb in a pint of hot water. It yields its virtues to cold

water by maceration, and as it possesses no poisonous properties, may be drank with great freedom.

GOUT—*Podagra*.—The gout is an inflammation of some one, or of several, of the joints of the body. Its seat is most commonly in the foot, especially in the first joint of the great toe. It will sometimes occupy every joint in the foot, and, at others, only the ankle or the toe joints. The whole foot often appears swelled and red. In some instances it attacks both feet at a time, but most commonly only one. The swelling and redness do not commonly begin to appear until twenty-four hours after the pain commences in the part.

The person will feel unwell for several days before the commencement of the inflammation in the foot. The head will feel heavy, and the body languid; there will be a loss of appetite, wind in the stomach, and a general sense of uneasiness; the feet and legs will be colder than common, and sometimes warm, with a sense of prickling through their whole length. For some days before any pain is felt, the feet and legs will cease to perspire, and be affected with a degree of chilliness.

An attack of the gout usually takes place in the spring or the beginning of winter, when changes in the weather, and sudden transitions from warm to cold, and from cold to warm, are the most frequent, and when the atmosphere contains the most moisture, and the earth is the wettest. Probably cold and wet feet are the most common cause of the disease. The causes which prepare the system for the disease, or which induce it, are intemperance; excess in eating; a daily use of wine at the table; night watching, or a want of the natural sleep; venery; the abandonment of accustomed labor or exercise; and a diet composed chiefly of animal food. A diet of animal food has a direct tendency to produce the gout, especially if it is accompanied with an indolent life. If people work hard, sweat, and toil every day, they can eat a large proportion of animal food with impunity; but if the blood is allowed to stagnate daily, like some putrid pool sunk among the hills, the gout will be sure to follow in those who are at all predisposed to it.

An attack of the gout usually commences in the night, or rather about the hour of two or three o'clock in the morning. A pain seizes the ball of the foot, or the first joint of the great toe, and sometimes the middle bones of the foot. A cold, shivering fit is felt at the same time, which gradually goes off as the pain in the joints becomes severe, until it entirely ceases, and, instead of cold, the patient becomes hot, thirsty, and restless. The pain in the foot commonly increases for about twenty-four hours, when the system becomes exhausted, and the patient falls to sleep, and begins to perspire. The part now begins to swell and become red. The disease is fully developed. After the swelling of the part, the pain is, in some measure, alleviated, but does not disappear. It returns, with more or less severity, every evening, until the disease or the system has become exhausted, and a resolution of the inflamma-

tion effected by a process of nature, or art, and the patient restored to health. The duration of the gout varies from a few days to several weeks, or a whole season. Some people are affected with it for eight or nine months in the year. It is only a little while in summer that they are exempt from it. To them the winter is synonymous with the gout. During the interval between the attacks of gout, the person usually enjoys an extraordinary degree of health. Between the first and second attack of the gout, there is often an interval of two or three years; but afterwards they become more frequent, and occur every winter, and sometimes twice or three times a year. The gout is not apt to attack young people. It seldom makes its appearance until after thirty-five years of age. It is much oftener a disease of men than of women. Dr. Cullen says that "This disease attacks especially men of robust and large bodies, men of large heads and corpulent habits, and men whose skins are covered with a thicker reticular membrane, which gives a thicker surface." He also says that the gout seldom attacks men employed in constant bodily labor, or persons who live much upon vegetable aliment. This is almost equivalent to saying that the disease is produced by living upon a meat diet: and when we reflect how much less liable women are to the disease than men, and that they, in general, are much less meat-eaters than men, and that all writers agree that the most speedy and effectual way of curing the disease is by living upon a vegetable aliment, the evidence becomes very strong that the constant stimulation of a meat diet prepares the system for the disease. We do not think, however, that this is apt to be the case where a meat aliment is united with hard labor, or severe exercise. But if a meat diet is combined with an inactive, sedentary, indolent life, we are fully of the opinion that the gout, or some other inflammatory disorder, will be produced by it. Dr. Cullen says again, and we believe he expresses the opinion of medical men of the present day, as well as of his own time, that "It is animal food which especially disposes to the plethoric and inflammatory state, and that food is to be especially avoided; but, on the other hand, it is vegetable aliment of the lowest quality that is in danger of weakening the system too much by not affording a sufficient nourishment; and more particularly of weakening the stomach by its acescency. It is, therefore, a diet of a middle nature that is to be chosen; and milk is, precisely of this kind, as containing both animal and vegetable matter." The vegetable substances which contain the greatest portion of nourishment are, wheat flour or meal, rye meal, Indian meal, rice, buckwheat, and barley meal. Bread made of any of these substances contains sufficient nourishment to keep the body in good condition, where people have been brought up upon it; and full enough for sedentary and inactive people to live upon, who have been reared upon a meat diet, or a mixture of meat and vegetables.

The idea that the gout travels about the system, stopping a little while here and a little while there, and that it can be driven from one place to another by the force of medicine, or recalled to the

foot again from where it started, by the use of means, is almost too fanciful to need a refutation. We should as soon think of driving an inflammation of the brain, of the lungs, or of the liver, to the feet, as of driving the gout to the head or stomach. The gout is an inflammation; the part which it affects is painful, sore to the touch, red, hotter than natural, and swelled. It furthermore raises an inflammatory fever in the system at large. As soon should we think of driving an inflammation of the eyes, or ophthalmia, to the brain or stomach, by the application of eye-waters, as of repelling the gout by any local application which we can make to the part inflamed.

The other parts of the system, — the stomach, bowels, head, lungs, heart, liver, and kidneys, — are, beyond a doubt, more or less secondarily affected in the gout; but that they ever are attacked with the same specific disease which existed in the foot is beyond belief. We think the idea is mischievous, and calculated to lead the mind of the physician into a labyrinth of uncertainties.

An inflammation, such as exists in the foot in a case of the gout, if transferred to the stomach, would produce gastritis; or if transferred to the brain, would produce frenzy or phrenitis; and if to the lungs, peripneumony; and those diseases could not be distinguished from the ordinary cases of gastritis, phrenitis, and peripneumony. Attacks of the gout often leave the constitutions of people in a broken state, like other severe diseases; and affections of the head, stomach, and bowels, are the natural consequence, without being parts of the same disease. We shall, therefore, pass over all that authors have said about *atonic*, *retrocedent*, and *misplaced* gout, as entirely conjectural and visionary. It is extremely doubtful, in our view, whether the gout is a constitutional disease, any more than the influenza, peripneumony, or gastritis. All inflammatory affections are liable to extend from one organ to another, and from one part to another. A chronic inflammation of the stomach will sometimes extend to the lungs, liver, heart, bowels, and spleen. An inflammation will sometimes commence in the stomach, and after it has extended to the lungs, the stomach will be relieved. In fact, there is no disease, in the whole catalogue of disorders, about which there prevails so much vulgar error and conjecture as about the gout. Nothing can be plainer to us than that the gout is an inflammation of the parts which it attacks, and that it requires a treatment similar to other inflammatory affections. It is not to be supposed, or expected, that blood-letting, in a part so distant from the heart, large blood-vessels, and vital organs, as the ball of the foot or the great toe joint, should be equally efficacious in producing a resolution of an inflammation as in those organs and parts where large blood-vessels abound, and which experience the most distension from the action of the heart. The tendons and bones contain but few blood-vessels, and these are extremely small. The abstraction of a gallon of blood from the arm would have but little tendency to unload vessels so few in number and so minute in size. General blood-letting, therefore, unless for the purpose of lessening

the action of the heart, and of preventing the effects of the inflammation upon other organs and parts, can have but very little salutary effect in the gout.

Domestic Remedies. — A person who has not had the gout can never know the disease which is about to settle upon him by the premonitory symptoms which we have enumerated; it is not until after the pain has commenced in the foot, or some other part, that he can have much suspicion that he is attacked with the gout. After the pain has commenced and become fixed, he may be able to know what to do for himself, or what may be done for others. If there is sickness at the stomach, a gentle emetic of ipecac. or lobelia will be required. After the operation of the emetic, a dose of rhubarb, calcined magnesia, butternut physic, a Rochelle powder, or two or three aloetic pills, should be given to operate upon the bowels. The patient should drink freely of hot catnip tea or of warm water. The feet should be immersed in water about the temperature of eighty-five or ninety, and soaked for an hour at a time; after which, they should be wrapped in soft flannel or combed wool. The wool is thought to be the best. Eight grains of the powder of sal nitre should be given every three hours; and if the pain and distress prevent sleep, thirty drops of the solution of morphine should be given. The inflamed part may be bathed three or four times a day in new rum or alcohol slightly warmed; and where the pain becomes intolerable, a tea-spoonful of laudanum may be mixed with the rum or alcohol. The spirits of camphor and laudanum are often used with good effect, kept constantly applied to the part. After the part becomes swelled, red and sore, and the pain and general commotion of the system have in a measure subsided, the Dover's powder, in doses of ten grains, three times a day, may be given. The diet must be light, and consist of fluids, such as gruel, — made either of barley, wheat, or Indian meal, — rice-water, bread-water, or weak milk and water. All heating things, such as hot-drops, spirits, and composition powders, must be studiously avoided. Such medicines are only suitable where there is no general fever, or in the chronic stage of the disease. A warm, soft, bread or flax-seed poultice, if changed often, is said by Lord Bacon to be the best application which can be made to a gouty swelling.

It is of the greatest importance that the patient should be kept warm and dry. Warmth is friendly to the disease, and cold aggravates it. In the inflammatory stage the part should always be kept still.

Professional Remedies. — The application of leeches, or the extraction of blood by cupping, in the gout, we regard as an indispensable remedy, if we wish to effect a cure of the disease. A dozen good Spanish or German leeches applied every day, for three or four days in succession, will be none too many.

The skin should be kept moist by the use of sudorifics, and the kidneys free by the use of the sal nitre, or the acetate of ammonia.

The sweet spirits of nitre, and Hoffman's anodyne liquor, should be used as much as possible, instead of opiates.

The colchicum, in the form of the saturated solution of the seeds in wine, has been given with good success. The dose is from twenty to forty drops. The gout has often been treated successfully with purgatives. In this case, a full dose of salts, senna, castor-oil, aloes, or pills in which colocynth is an ingredient, such as Lee's pills, is given every day, for one or two weeks in succession. This mode of treatment has, perhaps, been attended with as much success as any which has ever been adopted. The tartar emetic, in solution, and given to the amount of a quarter of a grain once in two hours, through the day, will generally operate sufficiently upon the bowels, at the same time that it moderates the pulse, moistens the skin, and relaxes the kidneys. The tartar emetic, in small doses, is conceived to be the most anti-inflammatory medicine which we possess. Calomel has often been used in the cure of the gout, but we believe it has never been attended with any signal success.

The warm bath is sometimes found serviceable. The cold bath, applied to the inflamed part, both by effusion and immersion, has sometimes resolved the inflammation. The volatile liniment, with laudanum, is a good local application.

The strychnine, a new salt procured from the *nux vomica*, should be tried.

In the chronic stage of the disease, it will often be necessary to strengthen the system by the use of quinine, columbo, gentian and preparations of iron. The red rust of iron, taken in a dose of a scruple at a time, powdered fine, and mixed with syrup, has been found remarkably serviceable. The chalybeate spring waters are an excellent way in which to take the iron. The Sulphur spring waters, in Virginia, are highly recommended in chronic gout. The veratrine, a new medicine, has lately been much extolled. The mineral acids are, in many cases, found to be better tonics than either iron, or the vegetable bitters. The guaiacum is an old and justly celebrated remedy in chronic gout.

GRANULATION. — The formation of new flesh. In the renewal of dead parts, the process of creating the flesh anew consists in the growth of little grain-like particles, which gradually unite into larger ones, until they fill up the old part. They are, when healthy, of a deep-red color, and never rise above the surrounding surface. Proud flesh is an unhealthy granulation, which requires the use of remedies.

GRAVEL AND STONE. — The size of the stones which are formed in the urinary organs varies from that of mere atoms which compose sand to that of a stone large enough to fill the whole bladder. In the gravel, that is, where the stones are small, consisting of mere grit or sand, the disorder lies principally in the kidneys. In this case, there is pain in the loins, which shoots down towards the thighs, and which is sensibly increased in attempting to walk or stoop. The water, when passed, deposits a gritty or

sandy sediment. The settlings of the urine discover little sandy particles. There will sometimes be more or less mucus, or blood, passed with the urine. The pain and distress will often come on very suddenly, and be very violent, occasioning sickness at the stomach and vomiting. When a gravel stone drops from the kidney of a size which is sufficient to fill the calibre of the ureter, — the duct which leads from the kidney to the bladder, — the urine is blocked up and distends the ureter, which produces the most excruciating pain, and often fainting. After the gravel reaches the bladder, the pain ceases, until many particles, by collecting together, form a stone. During the passage of the sandy particles, or gravel stones, from the kidney to the bladder, and until they have been voided, the urine is of a high red, or of a dark-brown color, and shows that the small blood-vessels have been torn open by the sharp points of the gravel. If the urine is long obstructed by the gravel, there will be great uneasiness, heat, thirst, a quickened pulse, dryness of the skin, costiveness, loss of sleep, and finally, if not relieved, an intermitting pulse, convulsions, mortification and death.

The cause of this disease is very obscure. The disease appears to be owing to the formation of an imperfect urine by the kidneys. The urine always contains a sediment, or settling of a reddish color, which, when it comes to be dried, and examined chemically, is found to consist of the same ingredients which compose the stones in the bladder. The urine contains a number of acids, alkalies, and earths, which, when they exist in wrong proportions, readily concrete into sand, gravel, and stones, and produce the disease in question. There are no less than seventeen different chemical principles in the composition of the urine. It undergoes a wonderful decomposition merely in cooling and settling. It is the most complicated secretion in the whole system, and liable to the most imperfections in its elaboration.

Children, from infancy to puberty, the intemperate, and elderly people are the most liable to it. Fermented liquors, such as ale, beer, cider, and wine, are supposed to produce it.

This disease comes on by fits, in those who are afflicted with it. In some it returns after short intervals, and, in others, it will not appear for years.

Domestic Remedies. — If the disease comes on with great pain in the back, nausea, vomiting, fainting, and a suppression of the water, or great pain in passing it, it will be advisable to give a dose of laudanum, or of morphine. From three to ten drops to a child, and from thirty drops to a tea-spoonful to a grown person. After the opiate has been given, the person should be put into a warm bath, and made to drink freely of warm rain or spring water. A tea-spoonful of the sweet spirits of nitre should be given every hour, in a tumblerful of cuckold weed or parsley tea.

A tea made of the uva ursi, bear's berry, or upland cranberry, is an excellent medicine in this disease. A tea-spoonful of the cream of tartar, dissolved in a tumblerful of the uva ursi tea, and drank

every hour, relaxes the kidneys, and causes a great flow of the urine.

The garden leek sometimes affords great relief. Take a handful of the root or fibrous parts, with a few sprigs of fennel, and boil them in two quarts of water, over a gentle fire, until the half is evaporated; then pour off the remainder, strain it, and drink about a pint a day. A steam raised about the lower part of the back and belly, by the use of cloths dipped in hot water, or boiled herbs, tends to relax the urinary ducts and to hasten the passage of the gravel. The drink should be pure spring or rain water, gruel, rice-water, gum-arabic water, and flax-seed tea, in addition to the teas we have already mentioned. The bowels should be drained by the use of a dose of oil, salts, or calcined magnesia. Copious injections of warm water will favor the passage of the gravel. Lemon-juice, mixed with the salts of hartshorn, and drank in a state of foaming, is a cardinal remedy in a fit of the gravel. A tea-spoonful of the powdered salts of hartshorn may be stirred into a great spoonful of lemon-juice and two great spoonfuls of water. This forms the acetate of ammonia, or spirits of minde-
rerus.

A weak lye, made from wood ashes, and drank two or three times a day, though a homely remedy, is a very good one. Ten or fifteen drops of the water of ammonia, mixed with a tumbler of water, and drank every two or three hours during the day, and continued for two or three weeks, has been found to destroy the tendency in the urine to concrete into gravel. It is supposed that the predominancy of an acid in the urine, called the uric acid, is chiefly the cause of the formation of stones and gravel, and that alkalies have a tendency to neutralize this result. Where alkalies fail, it will be advisable to employ acids, such as lemon-juice, vinegar, cream of tartar, sulphuric, muriatic, and nitric acid, upon the ground that the earths and alkalies may predominate in the urine, and so produce the calculi or stones and gravel.

The chalybeate mineral waters, or those which contain iron in solution, are sometimes completely effectual in checking the formation of gravel in the kidneys and bladder. We should place them in the foremost rank of remedies. We would therefore advise all those who are afflicted with this disease to repair to some of the springs with which our country abounds, and to abide there as long as the water is found to make them better, or until health is restored. The cathartic mineral waters are, in many cases, as serviceable as the chalybeate waters. The congress water has been designated as peculiarly beneficial in the gravel.

An abstemious diet is of the highest importance in this disease. Where there is an appetite, and but little fever, the aliment should consist of milk, custards, eggs, and broths made of chicken, veal, beef, and mutton. A moderate quantity of fresh meat of any kind may be eaten once a day, but not oftener. If there is any considerable degree of fever, the diet should be entirely restricted to vegetable substances, bread, rice, fruits, potatoes, beans, onions, beets,

carrots, turnips, &c. We take the following paragraph from Good's Study of Medicine :

"Of the mischievous effects of a luxurious diet, and the advantage of abstinence, M. Magendie has given a very striking example in the case of a merchant of one of the Hanseatic towns who was habitually afflicted with the complaint before us. 'In the year 1814, this gentleman,' he tells us, 'was possessed of a considerable fortune, lived in an appropriate style, and kept a very good table, of which he himself made no very sparing use. He was at this time troubled with the gravel. Some political measure unexpectedly took place, which caused him the loss of all his property, and obliged him to take refuge in England, *where he passed nearly a year in a state bordering upon extreme distress, which obliged him to submit to numerous privations ; but his gravel disappeared.* By degrees he succeeded in reëstablishing his affairs ; he resumed his old habits of luxurious living, and the gravel very shortly began to return. A second reverse occasioned him the loss of all he had acquired. He went to France almost without the means of subsistence, when, his diet being in proportion to his exhausted resources, the gravel again, the second time, vanished. Again his industry restored him to comfortable circumstances ; again he indulged in the pleasures of the table, and had to pay the tax of his old complaint."

An abstemious diet, pursued only for a few days, or a few weeks, is seldom productive of much good effect, unless it be in very acute inflammation. In chronic inflammations and diseases, the abstemious diet must be *chronic* also ; by which we mean, it must be pursued until the disease is conquered, be it for a longer or a shorter time. The length of no disease can be measured by hours and days, neither should the means adapted to its cure be restricted to time.

While the kidneys and the ureters are the seat of the disease, or while only sand and small gravel are formed in the urine, a vegetable diet and some active occupation will, in most cases, cure the disease. Sedentary people are much more disposed to the disease than those who are engaged in the active pursuits of life. Activity, therefore, must be ranked among the essential means of cure.

Rain or spring water is much preferable in this disease to the use of well water. Well water always contains more or less earthy and mineral substances, which make it hard. There may be some danger that these earthy and mineral particles may lodge in the kidneys and assist in the formation of the gravel. We believe it would be much better for the health of mankind, if they never were obliged to drink any other than rain or spring water.

Sailors are said to be remarkably exempt from the gravel.

Professional Remedies.—The assistance of the physician is often required in this disease, to draw off the water. After the gravel stones become so large as to block up the common urinary passage, the bladder often becomes distended with urine, which must be

drawn away by the catheter, or mortification and death would often ensue. The irritation and inflammation which the stones produce in the bladder come on by fits. In these cases, absolute rest is required, and sometimes blood-letting. The first concern is to keep the bladder free from distention, which can be judged of by the quantity of water passed, by the swelling of the bladder externally, and the sensations of the patient. The catheter is a glorious invention, and has saved many a life. The bougie is often of indispensable utility in enlarging the urinary passage, and in facilitating the transmission of the gravel stones, which, when they are of a moderate diameter, can often be made to pass the urethra by a little assistance. Lithotomy is a formidable operation, but the necessity of the case will sometimes demand it. We like the operation of drilling and breaking up stones in the bladder much better. But, to the reproach of our country, there are but few to perform it. We live in hope that some discovery will yet be made, of a liquid or a fluid substance, which, injected into the bladder, will completely dissolve the stones, as fast as they are formed. Such a discovery looks to us exceedingly probable. The urine itself is not a bland substance, for, when taken into the stomach, or applied to the skin, it excites irritation, although to the coats of the bladder it is completely innocuous. There is, therefore, a pretty wide field for hope, that some solvent of the stones may yet be discovered, which may be introduced into the bladder without irritating or inflaming it, and that the stones may be passed in a state of solution.

The liquor potassæ, in doses of fifteen or twenty drops, three times a day, in a tumbler of sweetened water, is one of the most valuable remedies, especially in those cases in which the urine deposits a red sediment, indicating an excess of uric acid.

GREEN SICKNESS, OR SUPPRESSION AND RETENTION OF THE MENSES.—The green sickness is exclusively a disease of females. It arises from the want of the sanguineous secretion which distinguishes womanhood from childhood. This secretion, called the menstrual discharge, or the menses, usually commences in our climate about the age of fourteen. In southern climates, it commences earlier by two or three years. Under the equator it commences as early as the ninth year, and what we consider as a child is there capable of becoming a mother. In our climate girls frequently go until they are fifteen and sixteen years of age, and sometimes seventeen, before this secretion takes place; but fourteen years is the average age of its commencement. With some among us it begins as early as the age of eleven or twelve. The want or absence of this secretion does not constitute a disease until it affects other parts or the whole of the system.

When a girl has passed the age of fourteen without the appearance of this secretion, and begins to complain of lassitude, heaviness, weakness, palpitation of the heart, pain in the small of the back and loins, costiveness, indigestion, wind in the stomach and bowels, amounting sometimes to colic, and the countenance and whole skin become pale, or of a greenish-yellow, we may be sure

that she has the green sickness. In this disease they usually become black under the eyes, and the lips become deadly pale; they are timid and shy. As the disease continues, the feet and legs begin to swell, and dropsical symptoms appear in other parts of the body; the pulse will be quick and small, and the person put out of breath on the slightest exertion. Hysterie feelings and spasms in the stomach are very common; and, in some cases, there will be a cough and night sweats. Indigestion or dyspeptic symptoms are very common attendants. The stomach and bowels are often so much affected as to lead to the suspicion that these parts are the seat of the disease.

The cause of the retention or the suppression of the secretion, after it has once made its appearance, is not known. It may be such a state of the womb as takes place in the other glands in a fever when there is a retention of the saliva or a suppression of it, or in the skin when there is a suppression of the perspiration. The mere want of this secretion must not be considered as a disease, unless the general health is deranged by it. If the general health has suffered from the suppression of this secretion, it commonly improves as soon as the secretion has become established and regular. Sometimes the secretion will commence and appear a few times, and then disappear for a long time; but if it does not injure the general health, it needs no particular attention. In point of practice, it makes but little difference whether the menses have never appeared, or whether the secretion has once commenced and afterwards been checked.

The most natural cure for this affection is marriage. Any considerable change in the mode of life, especially where that change affords an agreeable excitement to the mind, and adds vigor to the circulation of the blood, will operate very favorably upon the complaint. A removal to a warmer climate, or from the town to the country, will often give new impetus to the circulation of the blood, and awaken the proper action in the uterine vessels.

Nothing has more effect in regulating the natural monthly secretion of the uterus than daily systematic exercise. Some kind of work in which the whole system is exercised is always more efficacious than mere walks for pleasure, or even riding, which are never pursued constantly enough, or carried to a sufficient extent, to be productive of a cure. Girls who are always upon their feet, in the open air, and who are very active at play or work, are seldom much troubled with this complaint. Nothing gives impetus to the blood and distributes it to every part of the system like exercise. Breathing the open, fresh air also contributes very much to enliven the blood. The breathing of oxygen gas has been found effectual in the cure of the green sickness; what an inducement, then, for such invalids to live much in the open air, where they must necessarily breathe a larger portion of this vital gas than can be obtained within doors. Even the rays of the sun and the light have very considerable influence upon the general health. It is almost of as much consequence for people to take the sun as to

take the air. Through the medium of the eye the light affords an agreeable stimulus to the brain and to the whole system. The rays of the sun also exercise an important influence upon the skin and capillary vessels. Riding on horseback is a healthy and agreeable exercise where it can be pursued daily for a considerable length of time. A nutritious diet, composed chiefly of vegetables, though not exclusively, constitutes a very considerable part of the cure. Milk, eggs, and poultry, together with vegetables, form a very suitable diet. Wine and warming bitters will often be found of great service.

The medicines which are best calculated to restore this secretion and to establish it, are chalybeates, or medicines in which iron makes a part, and purgatives. Among the chalybeates, the Griffith's mixture is probably the most efficacious of any; and among the purgatives, aloes is by far the most preferable. Where the green sickness has become established, two or three or four pills of aloes should be taken every day or two, for at least two months, if the desired effect is not produced before. At the same time, a table-spoonful of Griffith's mixture should be taken three times a day. The precipitated carbonate of iron, in doses of a level tea-spoonful, mixed in molasses or syrup, twice or thrice a day, is one of the most potent and agreeable remedies. Pills of iron-rust may be used instead of Griffith's mixture.

Two pills of iron-rust, of the common size, may be taken at a time. The iron must be finely powdered, and mixed up with a crumb of bread or a little flour and molasses.

The red centaury has a very considerable effect in restoring the healthy tone of the uterus. This medicine should always receive a trial; it is given in the form of a tea or infusion, and should be persevered in for a length of time. The thoroughwort, taken every day for a month or two, has often effected a cure. Tansy tea is not only an old remedy, but a very excellent one. Warm bathing, by which the blood is determined to the surface, is of great use, especially bathing the feet and legs. Bathing the surface over the uterus with hot cloths dipped in decoctions of pennyroyal and tansy is also extremely serviceable.

This secretion should be particularly solicited by hot bathing, and the other remedies above named, at the expected time of its return, whenever it can be ascertained by the pains in the back, sense of bearing down, and other symptoms common to the monthly sickness.

• A visit to Saratoga, or some other iron spring, should always be tried where the cure is procrastinated. We believe the waters at Saratoga are peculiarly well adapted to the cure of this complaint.

The steam of warming herbs, applied topically, should always be used about the time of the monthly period. The elixir proprietatis and the tinct. of guaiacum are very appropriate remedies in the disease. The pill rufi is often serviceable. Emetics are sometimes effectual when other remedies have failed.

GRIFFITH'S IRON MIXTURE—Compound Mixture of Iron.—This celebrated preparation of iron is formed in the following way: Take of myrrh, powdered, one drachm; sub-carbonate of potash, or pearlash, twenty-five grains; rose-water or well water, seven ounces and a half; sulphate of iron, powdered, a scruple; spirit of lavender, half an ounce; refined sugar, one drachm.

Rub together the myrrh, the sub-carbonate of potash, and sugar; and during the trituration, or grinding with the pestle, add gradually: first, the water or rose-water and spirit of lavender, and, last, the sulphate of iron or green vitriol. Pour the mixture into a glass bottle and stop it close.

The dose of this chalybeate mixture is an ounce, or two table-spoonfuls, twice a day. It is used in cases of green sickness, hectic, and consumption, and other diseases where there is not much fever and general debility. It is a safe and efficacious tonic. Few medicines are oftener used than this, or with more success, where there is loss of tone to the stomach, and the appetite fails.

GUAIAECUM.—The gum guaiacum is a resinous substance obtained from the *lignum vitæ* tree, which grows in the West Indies. The wood of this tree is highly medicinal. A strong tea made of *lignum vitæ* chips will open the pores, increase the flow of the urine, and operate gently upon the bowels. It is a warming aromatic. Guaiacum is hard, brittle, of a greenish-yellow color, and of a bitterish, hot taste. The powder, in a dose of half a drachm, promotes the urine, and raises a sweat. In a larger dose, it operates upon the bowels. It possesses nearly all the hotness and pungency of red pepper, besides its disposition to open the pores and relax the kidneys and bowels. In the chronic rheumatism it is excelled by no remedy. In all complaints where there is no fever and the body is cold, the guaiacum is a valuable medicine. It has been given with success in palsy and the dropsy. In diseases of the skin it exerts considerable efficacy. The tincture, in the dose of a tea-spoonful, is the common way of giving it.

GUINEA WORM—*Dracunculus*.—This worm is one or two feet in length, and about the size of linen thread. The egg, or germ of it, is in some way deposited under the skin, where it produces a swelling and inflammation, and, finally, an ulcer.

The worm, coiled up in its nest of flesh, continues to grow, until its head protrudes through the skin. It is peculiar to Africa, and the eastern nations, but sailors who visit there, and the natives who come from there, are liable to be infested with it. The only remedy for it is to pull the worm out. This cannot, however, be done until after it has got its growth, and the tumor or boil in which it is imbedded has suppurated and broken. The tumor is never very painful. It is sometimes poulticed, like other tumors.

GUM AMMONIAC, OR, AMMONIACUM.—This gum, or, properly, gum resin, is a native of the East. The poorer kind is imported in large masses, but the best quality, in small, round fragments, with a yellow surface and white texture within. Its

smell is faint, and taste nauseous. Nearly half its weight is resin. In a large dose, it operates as a purgative, sudorific, and diuretic. It allays spasm, loosens phlegm, and removes intestinal and uterine obstructions. Of late years, it has been administered principally as an expectorant or cough medicine, in doses of from two to five grains, either in the form of pill or mixture with water. Its purgative and other properties seem to have been mostly forgotten.

In coughs, asthma, and catarrh, it is a valuable and efficient remedy. Combined with laudanum, morphine, or squill, it is much used in the second stage of severe and protracted influenzas.

The milk of ammoniac, — lac ammoniac, — is made by triturating two drachms of the gum with eight ounces of water, the water being slowly added. Dose of the lac or milk, one or two teaspoonfuls three or four times a day.

In dropsies and visceral obstructions, it is given in doses of ten to thirty grains.

GUM ARABIC — *Mimosa Nilotica*. — This gum consists of round, transparent tears, without taste or smell. It comes from Africa, Arabia, and Egypt. It is very tenacious, and well calculated for a medium to form pills and other ingredients. Dissolved in milk, to the amount of three ounces a day, it is said to have cured bleeding at the lungs. In affections of the bowels, such as dysentery, diarrhœa, and cholera morbus, dissolved in water, it is an excellent demulcent. It is no less useful in coughs and affections of the throat and lungs. It readily dissolves in water and forms a mucilage.

It is nutritious, — so much so, that the Moors are said, in the fall of the year, to live upon it. In a stoppage of the water, and affections of the urinary passage, the mucilage is one of the best medicines we possess.

GUTTA SERENA. — An affection of the optic nerve. See *Dimness of Sight*.

H.

HARDHACK. — The stem of this plant grows to the height of about two feet, with yellowish flowers, and large, thin leaves. The tops are the parts used in medicine. It is a mild astringent. Its taste is warm and pungent, and its smell is aromatic. In bowel complaints, where a mild warming astringent is required, the hardhack is a useful medicine. The tops are made into a strong tea, and taken three or four times in the course of a day. It is sometimes applied as a healing wash to ulcers, sores, and bruises.

HAIR-LIP. — A slit in one or both lips. It is a deformity with which children are often born, and which can only be remedied by a surgical operation. The edges of the opening are

deprived of their skin, and brought closely in contact by stitches and plasters, when they grow together.

HEADACHE.—In all febrile diseases, headache is generally one of the first symptoms; and in the inflammations of other organs a pain in the head is very common; but the complaint which we mean to treat of here is not a symptom of other diseases, but a real affection of the brain, and of the membranes and bones which enclose it. The bones and membranes are often affected with rheumatic inflammation, and the brain itself is liable to the same diseases as other organs, — to irritation, weakness, inflammation, tumors, abscesses, and dropsy.

The seat of the headache is variable. Sometimes it will be confined to the forehead; at other times, to the temples; and at others, again, to one side of the head. In some instances it will be deep-seated, and appear to arise from the bones of the head or the membranes. The sensation of pain is the only guide we have with respect to its seat. In some individuals it will be attended with nausea, or sickness at the stomach; in this case it is called the sick headache. The pain, in some cases, is dull and heavy, and affects the whole head, and, in other cases, is sharp, darting or throbbing. The headache varies in its duration from two or three hours to one or two days. In many people it is periodical, recurring every day, or every other day, at a particular hour, or every two or three weeks. The headache is commonly without heat, thirst, dryness of the tongue, or any other symptom of fever. It is relieved by vomiting and sleep, and increased by noise, light, and motion. The scalp and bones of the head will often feel very sore to the touch; the countenance and eyes will be flushed, and the pulse quick. The soreness always evinces a degree of inflammation.

The sick headache usually comes on in the morning, and is generally attended with a vomiting of bile or phlegm. The pain darts from one part of the head to another, until every part has been affected in succession. Sedentary people are the most severely afflicted with it. With many people, the headache will always occur in a particular spot, and that spot will not be larger in circumference than a nuncupence or a quarter of a dollar. The appetite is destroyed for the time, and the mind is incapacitated for any employment. Nervous people are extremely liable to this form of headache.

The hemicrania, where the pain affects one side of the head, usually occurs in the evening, or soon after the digestion of the dinner. This form of the headache is also sometimes attended with sickness at the stomach. It affects people in whom the digestive organs are diseased, and who are subject to hypochondrism. It will, however, in some instances, affect those who are no otherwise diseased.

The chief causes of the headache are some violence done to the head, tumors, abscesses, an effusion of water in the brain, a check of the perspiration, or too long an exposure to cold and damp,

dyspepsia, and a disease of the nerves. It will often be brought on by hard study, anxiety and perplexity in business; by extremely hot or extremely cold weather; by too great a degree of the light of the sun after a long spell of cloudy weather. Whatever disturbs the nerves in general, will, in many people, bring on a fit of the headache. Excess in eating and drinking is a prolific cause of the headache. Old writers oftentimes attribute it to the suppression of accustomed secretions and the running of old ulcers, and the transition of humors, but these causes are extremely doubtful; they have been repeated by one writer after another, from the earliest ages, without having been thoroughly examined by any.

Domestic Remedies.—Where there is no fulness of blood in the head, which is known by the pulse, and the swelled, red state of the blood-vessels of the face and eyes, an emetic of ipecac., lobelia, or antimony, will be the most certain way of removing the pain. Immersing the feet in warm water, and drinking plentifully of hot herb teas, to produce a sweat, will often be sufficient. Catnip, pennyroyal, motherwort, thoroughwort, sage, spearmint or peppermint, are either or all well calculated, when infused in hot water, to raise a perspiration. The application of cold water, if continued for half an hour or an hour, will often remove a headache. Vinegar will accomplish the same thing if the head is thoroughly soaked with it. The spirits of camphor, or any kind of ardent spirits, will cure a fit of the headache, if used as a bath. Cologne-water, applied freely to the head, is an old and very effectual remedy.

The most obstinate headaches have sometimes been cured by drinking a tumbler of cold water as soon as the person arises from bed in the morning, and by soaking the head or showering it with the same.

Equal parts of James' powder and aloes, made into four pills of the common size, and swallowed at night, are often found to prevent and to cure the headache. These pills will open the pores at the same time that they unload the bowels. Twenty drops of morphine, or of laudanum, where there is no fever, will succeed in many cases.

Professional Remedies.—Nothing will relieve some headaches but the abstraction of blood, and where the blood-vessels of the head are crowded, as they often are, it is the most natural remedy. Leeches will, however, answer the purpose much better than opening a vein, in a majority of cases. Sometimes it will be necessary to strengthen the whole system by the use of bitters, iron, and mineral waters. Where the headache arises from a bilious stomach, or disorder of the digestive powers, attention must be paid to the restoration of these organs before a cure can be expected. Blisters upon the neck or arms are often of great service. Valerian, ether, castor, cicuta, or musk, are all beneficial in certain cases and constitutions. Spirits of hartshorn and other alkalies will help some cases, especially where there is much

sourness of the stomach. The calcined magnesia, administered as a cathartic every day, for a length of time, will regulate the stomach and bowels.

Where the pain appears to be in the bones of the head, it may be inferred to be rheumatic, and to require the same treatment with rheumatism in general. The tincture or powder of guaiacum and the quinine will be proper. The Dover's powder may be given every night, and the sal nitre, in powder, during the day. There is no more powerful nor surer remedy in chronic rheumatism than the sal nitre. It should be given in six grain doses, every three hours. Mustard poultices to the feet are often productive of relief in severe headaches. In these cases the diet should always be light, and the drink bland and simple. Cold water and common tea and acid drinks are the best.

HEART.—The human heart is shaped very nearly like the heart of quadruped animals, particularly that of the hog. If a person has seen the shape and the situation of the heart in the hog, he can form a pretty good idea of the same organ in man. The heart is enclosed in a case called the pericardium, and lies a little on the left side of the chest, so that the beating of the heart can be much better felt and heard on that side than on the right. The apex or point of the heart is placed on the sixth rib of the left side, and its under surface rests upon the diaphragm, or the partition between the chest and the belly. The heart has four separate chambers, two of which are called auricles and the other two ventricles. The auricles are smaller than the ventricles. The blood passes from the veins into the auricles or front chambers, and from the auricles into the ventricles. It enters the right auricle, passes through this into the right ventricle, and out of the right ventricle into the lungs; there it receives its vital properties, and then passes back again into the left auricle of the heart, and from this into the left ventricle, and thence into the aorta. Between the auricles, there are valves to prevent the blood from being forced back when the heart contracts, and to support the column of blood beyond them. The heart is a muscular substance, and by the manner in which its fibres are interwoven, is endowed with remarkable strength.

In the fœtus, the blood passes immediately from the right auricle to the left, through a hole called foramen ovale, which closes up the moment the child is born. In the fœtus, the blood does not pass through the lungs of the child, but receives its vitality from the lungs of its mother.

HEART-BURN—Cardialgia.—Pain at the pit of the stomach. It is one of the symptoms of dyspepsia. The pain is accompanied with acrid, hot, and sour eructations. Sometimes there is faintness, and oppression of the stomach with wind, and a discharge by the mouth of a watery, ropy fluid. A little lye made from wood ashes, calcined magnesia, a few drops of the water of ammonia, or, which is better than either, a little piece of crude soda dissolved in water, will correct the sourness and quiet the pain.

The bowels should be kept open, and the diet should consist of substances not liable to ferment. See *Dyspepsia* and *Water-brash*.

HEARTCASE—Pericardium.—A transparent, membranous bag that surrounds the heart and secretes a watery liquor which lubricates its surface. A dropsy of the heart takes place when the heartcase becomes filled with water. This disease is known by a distress in breathing, an intermitting pulse, a pale or purple countenance and lips, and a fluctuating sound of the water in the beating of the heart. See *Dropsy*.

HEAT.—Heat is essential to life, and many have supposed it to be synonymous with life itself. The young of many animals appear to be called into life by the agency of heat alone. But the germ or egg is as essential as the stimulus which awakens it into life. Chickens and many other animals are hatched by artificial heat. People apparently dead by drowning and strangulation are resuscitated by heat. It is probably the most powerful stimulant in nature of the vital actions. Hence its powers in exciting inflammations and inducing disease, as well as its properties of awaking animal life. Its diffusibility exceeds other agents as much as its solvent power. The proper application and regulation of heat is one of the greatest means in curing diseases. A fever may be induced, moderated, aggravated, or cured, by a mere change of the temperature. An inflammation may be excessively aggravated, or it may be subdued, by a greater or less degree of heat. A proper degree of heat increases the circulation, raises the spirits, promotes the secretions, and invigorates the whole system. It stimulates the powers of the mind as well as of the body. The verdure of spring and the ripening influence of summer will give us some idea of the wonderful agency of heat, and its power in generating and curing disease. It is essentially a stimulant.

HEAT ERUPTION, OR PRICKLY HEAT.—We take notice of this eruption more for the purpose of throwing some light upon the nature of other skin-diseases, than because the heat eruption deserves any particular attention in a medical treatise. It is allowed on all hands that this eruption is produced by heat alone, either by the heat of the direct rays of the sun or some violent exercise of the body. No suspicion has ever fallen on the digestive organs as the seat of it. In this disease, heat either acts as a poison or a stimulant, and produces an eruption which resembles several other kinds of eruptions, incident to the surface of the body. The only inconvenience which this eruption produces is a slight smarting and tingling, which are easily allayed by a little new rum, cologne-water, or laudanum. The eruption consists of a multitude of little red pimples, about the size of a head of a pin, which, in about a week or fortnight, die away and leave a little white scurf or scale. The pimples contain a watery matter. The heat-spots are perhaps vesicles rather than pimples, being often of the nature of little blisters.

We here wish to make a few remarks with respect to eruptions of the skin in general. We think they are too often ascribed to disorders of the stomach and bowels, or to acrid humors in the blood, or in the other fluids of the system. If such an agent as heat can produce an eruption of the skin in a perfectly healthy person, there may be a hundred other agents capable of producing the same thing without any particular affection of the digestive organs or of the fluids of the body. Dirt and filthiness are beyond a question often the causes of diseases of the skin, and they probably act upon it something in the same way with heat. We are also inclined to believe that many diseases of the skin are owing to some peculiar constitution of the atmosphere; having often noticed that some particular kind of eruption of the skin, as the eating tetter for instance, has prevailed very much like an epidemic among children.

The salt rheum will prevail much more in some seasons than others. One constitution of the atmosphere will produce an epidemic influenza; another, an epidemic sore throat; a third will produce an epidemic peripneumony; and a fourth, an epidemic dysentery, rheumatism, or fever. Why a particular state of the atmosphere should affect the throat in preference to the lungs, or the bowels in preference to the throat, we are unable to determine; but such are the facts, and we believe the skin is often affected with different eruptions from the same cause. The skin is often affected with sores in consequence of eating fruit, particularly sour apples and those fruits in which there is a great excess of acid. In this case, either the acid or some other quality of the apples affects the skin particularly, since all other parts of the body remain sound.

Mercury affects the salivary glands especially. Nitre affects the kidneys; salts, the bowels; squills, the lungs; and acid fruits, the skin. There is no doubt but that the whole vegetable and animal kingdom, more or less, partakes of the constitution of the air of the season, and influences the human body in whatever we eat. The sting of a wasp produces a peculiar pustule; the sting of nettles produces a different pimple; and dogwood, a very extensive and painful eruption, attended often with much swelling and inflammation. It is very probable that most eruptions of the skin will, if their causes are ever known, be traced to some peculiar state of the air, or to some noxious agent applied either to the skin or to the stomach.

HECTIC FEVER. — The hectic fever does not occur as a disease of itself, but is symptomatic of other diseases. It is a pretty uniform attendant of consumption, and often results from chronic diseases of the stomach, bowels, liver, kidneys, and brain. Any deep-seated and extensive injury of the bones, or essential organs, may be followed by this fever. It is often witnessed in scrofula, chlorosis or green sickness, nervous affections, insanity, and dyspepsia. The hectic fever has two exacerbations or fits of severity in a day; one commonly occurs about noon, and the

other, in the evening. They go off with profuse sweats, sometimes called night-sweats, and are succeeded by remissions or abatements. There is usually a small, quick pulse, moderate thirst, restlessness, and a lateritious or brick-dust sediment to the urine. This fever can only be cured by curing the disease upon which it depends. The quinine, columbo, cascarilla, opium, sal nitre, sweet spirits of nitre, wine, elixir vitriol, and the other mineral acids, are all given with more or less freedom in the latter stages of the disease.

HELLEBORE — *Helleborus Niger*. — This plant grows wild in the mountains of Austria and Italy, and is perennial. It is a violent purgative, and was formerly much used in melancholy and insanity. The proper dose for a purgative is from ten to twenty grains. The root, which is the medicinal part, consists of small fibres attached to one head. It yields a resinous extract, upon which its virtues appear to depend. Its taste is very acrid. In the dropsy and chlorosis it has been highly recommended. The American or white hellebore, or bear's-foot, grows in our own meadows, and has been used to destroy worms, but is considered too violent for common use.

HEMATEMESIS. — A vomiting of blood. See *Bleeding from the Stomach*.

HEMATOCELE. — A tumor caused by blood being let loose in the scrotum or spermatic cord.

HEMATURIA. — The voiding of blood from the urinary organs. See *Bleeding from the Bladder and Kidneys*.

HEMICRANIA. — A pain which affects only one side of the head. It is commonly periodical, occurring at longer or shorter intervals in different individuals. Bilious, nervous, and hysterical, or hypochondriacal people are the most subject to it. The extract of cicuta, or hemlock, has been known to relieve it. It requires rest, opening medicines, and temperate living. A leech or two, or a blister, applied to the painful spot, will often remove the pain. See *Headache*.

HEMIPLEGIA. — A palsy of one side of the body. See *Palsy*.

HEMLOCK — *Conium Maculatum* — Common Cicuta. — This plant is indigenous to our soil. It grows in great abundance, in rich, shady places, and by the side of hedges and fences. The stalk is hollow, and marked with red and brown spots. It grows to the height of five or six feet, with leaves of a dark-green color, which have a faint, disagreeable smell. It is a powerful-narcotic, or, in other words, it resembles opium in its effects upon the system. Unlike opium, however, it does not produce costiveness. The leaves, powdered, may be used, or an extract can be procured from the leaves and stems.

A dose of the powdered leaves is two or three grains, and a dose of the extract, one grain, gradually increased. When taken in an over dose, it causes dizziness, sickness at the stomach, tremors, stupor, and convulsions. The cicuta, mixed with the red rust of iron, is much used in the cure of insanity. In cancers and

scrofula, it has been long celebrated. In consumption, its powers have been no less esteemed than in the alleviation of painful cancers, and king's evil.

In scirrhus affections of the stomach and liver, and in painful menstruation, few remedies have been attended with more benefit. It has been known to relieve that painful affection of one half of the head, called hemicrania. The way to use it with effect is to increase the dose by one or two grains every day, until a slight degree of dizziness is felt in the head. The plant should be collected anew every year, and the extract made by evaporating the liquor of the boiled leaves, by means of a salt water bath, kept at the boiling point.

The hemlock, well prepared, and in a fresh state, is one of the best narcotics in use. There are few painful affections but what may be relieved by it.

HEMOPTYSIS—Bleeding from the Lungs.—See *Bleeding from the Lungs or Lights*.

HEMORRHAGE.—Bleeding, or voiding of blood.

HEMORRHOIDS—Piles.—See *Piles*.

HENBANE—*Hyoscyamus Niger*—Black Henbane.—This is a biennial plant, which abounds in villages and by the side of roads. It is covered with long hair, from which exudes a sticky, fetid juice. The leaves are large and very soft. The flower-cup is of a pale yellowish color, beautifully veined with purple. The henbane is a narcotic, and more than any other resembles opium in its action. It is given in the form of an extract. The dose is from one to two grains. In epilepsy, hysterics, palpitation, cough, and many painful and spasmodic diseases, it is used with much success.

HEPATITIS—Inflammation of the Liver.—See *Inflammation of the Liver*.

HERNIA.—A rupture of the bowels. See *Rupture*.

HERPES.—A disease of the skin, called tetter. See *Tetter*.

HIVE SYRUP.—This syrup is made by boiling together, over a slow fire, half a pound of seneca root, bruised, and half a pound of squills, bruised, in four quarts of water. It must be boiled until half of the water is consumed; strain the liquor, and add to it four pounds of honey.

Boil the honey and the strained liquor to six pounds, and add to every pound of the syrup sixteen grains of tartar emetic.

This is a famous croup syrup, recommended by Dr. Cox, of Philadelphia. It operates by puking, purging, and sweating. It is given to children in this disease, every quarter, half hour, or hour, until it operates well. The dose varies from ten drops to one or two tea-spoonfuls, according to the age of the child. A child six months old may take half a tea-spoonful, and one a year old, a tea-spoonful. It is an excellent medicine in common colds and coughs, in peripneumony, and whooping cough, or in any of the diseases of the lungs or throat, where an expectorant is required.

HOARHOUND—*Marrubium Vulgare*.—The hoarhound grows

among rubbish, and by the side of roads. The leaves have a very strong smell, and a rough, bitterish taste. It is a good cough medicine. It loosens the phlegm, and promotes the raising of it. In asthma and affections of the lungs it is an excellent domestic medicine. An infusion or tea can be made of the leaves, and taken every two or three hours through the day, sweetened with honey. When taken plentifully it loosens the bowels. Made into candy, it makes a very pleasant medicine for common coughs and colds.

HONEY. — Honey, besides its medicinal qualities, is a valuable and healthful article, of food. In some individuals, not habituated to its use, it may occasion some little gastric disturbance. Where eruptions and humors exist its use should be discontinued, as it has been thought to aggravate them. It is opening to the bowels, and promotes the secretion of phlegm, or mucus, in coughs. With the vinegar of squills, in the proportion of two ounces of honey to one of the vinegar, it forms the honey of squills, which, in the dose of half a tea-spoonful or a tea-spoonful, is a good medicine for children, in coughs and colds.

Honey might easily and profitably be made a substitute for butter. Of a middle nature between animal and vegetable substances, it is in some measure adapted to supply the place of both. It seems friendly to the animal economy, and if any article of food can be called an alterative, honey must be one. Bread and honey is a luxurious diet, but withal healthy. To produce a sound, healthy race, ours should be a land flowing with milk and honey.

HOP — *Homulus Lupulus.* — The common hop is bitter, somewhat aromatic, and astringent. It is also, in a considerable degree, narcotic or anodyne. It abates the pulse and produces sleep. For children it often proves a sufficient anodyne. The dose, in substance, for an adult, is three grains; of the tincture, a tea-spoonful. The common form is a tea made of the leaves. It is much used in dyspepsia and hysteric diseases, and with good effects.

It is said that a strong tea of hops will dissolve calculus, or stone, when removed from the bladder; if so, why not inject it into the bladder, and test its solvent power there? In cases of gravel, the tea taken freely has been attended with much benefit.

A dose of the tea is a wine-glassful, every few hours through the day. A hop poultice is a good application for painful cancerous sores. A pillow of hops has some tendency to produce sleep.

HORSE-RADISH — *Cochlearia Armoracia.* — This plant is often cultivated in gardens and sold in market for a seasoner of food. It has a penetrating, hot, smart taste, and a pungent smell. The root quickens the circulation of the blood, warms the stomach and bowels, and promotes all the secretions. In dropsy, chronic rheumatism, green sickness, and palsy, it exerts no inconsiderable power as a remedy. Applied externally, it is a forcible stimulant. If not taken too often it improves digestion and increases the flow

HOT-DROPS. — This is a tincture of red pepper and myrrh. It is a good medicine in chronic rheumatism, and all diseases without fever, and where there is a coldness of the constitution. It increases the heat, quickens the circulation, and raises a sweat. It is also a good external application. Applied to swelled joints, and to the surface of the body in inflammatory complaints, it answers, in a measure, the purpose of a blister.

It is not a medicine which can be used long at a time without impairing the tone of the stomach. Any substance which raises a blister upon the skin will, if taken too freely, have a similar effect upon the stomach.

HUMERUS. — The large bone of the arm, which extends from the shoulder-blade to the elbow.

HYDATIDS. — A very singular parasitic animal, growing in different parts of the body, and especially in the kidneys and liver. Hydatids consist of small, semi-opaque bags or cysts, containing a clear watery fluid. They are formed like a bladder, and vary in magnitude from the size of a small shot to that of an orange. Though usually white they are occasionally met with of an amber color. They are found in all the cavities of the body, not excepting the ventricles of the brain, and are generally attached to the large glands. Sometimes they are scattered and distinct, but oftener grouped together in clusters. It is not unusual for many small ones to be attached to the insides of the larger ones.

The origin and real nature of hydatids are not fully understood, though it is generally admitted that they possess a distinct animal life; neither is it often that their existence can be known, with any degree of certainty, until after the death of the patient. This, however, is not of so much importance as it might at first seem, as their location is generally such that they could not be removed if their existence were positively ascertained.

The existence of hydatids may be strongly suspected, (when they are so large, or numerous, or so situated, as to produce a tumor that can be felt externally,) by the roundness of the tumor, by the obscure sound on percussion, by the fluctuation, such as is observed in dropsies, and by a peculiar feel and sound communicated to the hand and ear of one who is experienced in this department of the profession, aided by exploration with an exploring needle, where this can be practised with safety. Their existence may, occasionally, be certainly known by the escape of some of them, through the natural outlets of the body, or through accidental wounds or sores, a circumstance that sometimes occurs.

Remedies. — In regard to the treatment of hydatids, but little can be said. The muriate of mercury has by some been thought to have a special action upon them, causing their death and absorption; but this opinion has not been confirmed by experience, and it is extremely doubtful whether any known medicine can have any specific effect upon them, except in those rare cases in which they are so situated that the remedy can be applied directly to them, without going through the stomach and blood.

Inflammation sometimes attacks the cysts of hydatids, occasioning more or less pain and soreness in the parts to which they are attached, and general disturbance to the system; when this occurs, it should be promptly met with the means usually employed to subdue inflammation in other cases. Should they be situated within the reach of the surgeon, they should be punctured or extirpated, as may be most expedient.

HYDRAGOGUE. — Medicines which drain the body of water in dropsy, such as cream of tartar, sal nitre, digitalis, salts, and squills.

HYDROCELE. — A collection of water between the testis and one of the coats or membranes which invests it, called the tunica vaginalis testis. This is a local dropsy, producing a colorless pyriform tumor in one side of the scrotum. When accompanied with disease of the testis, it is unattended with pain, soreness, or danger. The swelling commences at the lower part of the testis, and gradually proceeds upwards. The tumor sometimes attains an enormous size, and it is not uncommon for it to remain for months or years without any material alteration. The swelling is elastic, equal, and partially transparent, which, with its pyramidal form and the absence of pain, will distinguish it from hernia and scirrhus of the testis. The cause of this complaint is often involved in obscurity, appearing in many cases to come on spontaneously, without any apparent cause. It has, however, been attributed to bruises and injuries sustained in riding on horseback and otherwise, colds, rheumatism, and an irritable state of the urethra.

Remedies. — Medical treatment is unavailing in this complaint; but it is curable by a surgical operation. It may be palliated, and the inconvenience arising from the bulk of the tumor obviated, by drawing off the contents with a trocar. The radical cure is effected by injecting the sac with some stimulating liquor, such as solution of sulphate of zinc, or diluted tincture of iodine, by means of a suitable apparatus.

HYDROCEPHALUS — Dropsy of the Brain. — It appears to be the consequence of inflammation, falls, rickets, or of the weakness and effects of other diseases. It is mostly confined to children under twelve years of age. It is often the consequence of the bowel complaints of children. Where it is a chronic complaint, the head sometimes becomes very much enlarged, and the bones of the skull are even separated.

The acute disease is known by pain in the fore part of the head, stupor, dilatation of the pupils, vomiting, slowness of the pulse, and convulsions. In the commencement of it, when there is an inflammatory action of the brain, the skin is hot and dry, the tongue furred, the face flushed, all the secretions of the body affected, the pulse quickened, and the senses more or less disturbed. In this stage of the disease, the remedies employed in the treatment of brain fever will be proper; but after the disease has become chronic, the means used for the cure of dropsy, in general,

must be employed. There is one remarkable symptom in this disease. It is the squinting of one or both eyes. It is not an invariable symptom, but a very common one. See *Dropsy*.

HYDROCYANIC ACID—Prussic Acid.—A powerful narcotic and sedative. It is obtained from the Prussian blue. See *Prussic Acid*.

HYDROGEN.—An elementary air. It is highly inflammable, and fourteen times lighter than the common air.

HYDROPHOBIA—Canine Madness.—See *Canine Madness*.

HYDROTHORAX—Dropsy in the Thorax or Chest.—This term is derived from two Greek words, meaning water and thorax. Dropsy in the chest very rarely, if ever, exists as a primary, idiopathic or original disease, but is generally a symptom or consequence of some other affection. The diseases with which it most frequently coexists, or by which it is caused, are affections of the heart and large blood-vessels, and of the lungs and pleura. It may be a consequence of a general debility, or broken-down condition of the whole system, or an extension of a general dropsy, dependent upon disease of some part more or less remote from the chest. It may be confined to one side, or extend to both. The general symptoms of dropsy in the chest are the same as those of dropsy in general. Those which are peculiar to hydrothorax are a dry and annoying cough, difficulty of breathing, which is very much increased by a horizontal position and by exercise; the feet and legs swell, and become edematous as the disease progresses; there is palpitation of the heart, and the patient is at times in dread of suffocation; the surface of the body shows signs of obstructed circulation, and the lips become purple or deadly pale; the pulse is quick, small and irregular, and at length the patient dies from exhaustion and suffocation. When one side only is affected, the side containing the water will be more rounded, and the spaces between the ribs will be widened, and the difficulty of breathing will not be as great when lying on one side as the other. The sound elicited by percussion over the seat of the water will be dull, and, on applying the ear, or auscultating, there will be an absence of the respiratory murmur, or it will be very obscure, except over the spine on the back, where it will be more distinctly heard. The prognosis is generally unfavorable, but depends much upon the nature and seat of the original affection of which the dropsy is a symptom. The disease may be slow and insidious, or rapidly fatal; but this, like the prognosis, will depend upon the primary affection.

Remedies.—The treatment of dropsy in the chest must be conducted upon the same general principles that are observed in other forms of dropsy. When practicable, the original disease should be ascertained, and suitable measures adopted for its removal, as, without this, no permanent benefit can be expected to result from any mode of treatment that may be pursued for the removal of the dropsy. There is no domestic remedy that can be depended upon for the cure of this disease; but the more potent

medicines may be aided by the use of the infusion of dog's-bane, Indian hemp, cleavers, upland cranberry, and other diuretics.

Among the various professional remedies, may be enumerated counter irritation, by blisters and tartar emetic ointment; jalap and cream of tartar, or magnesia, in large doses; foxglove, squills, calomel, elaterium, acetate of potash, balsam of copaiva, spirits of turpentine, cantharides, and other hydragogue cathartics and diuretics.

HYPOCHONDRISM. — This disease is known under the names of low spirits, hypo, vapors, or spleen. It is a state of constant fear, anxiety, and gloom. All business and the common pursuits of life become tasteless and irksome. The person is usually haunted with the idea or impression that something dreadful, either disease or death, or some worldly calamity, is about to happen to him. Night and day he is oppressed with a heaviness of the spirits and a load upon the heart. He neither wishes to see anybody, go anywhere, or to do anything. He experiences the greatest distress of feelings and gloominess of mind in the morning. After taking breakfast and moving about a little, he begins to feel more cheerful, and disposed to attend to ordinary pursuits. People affected with this distemper commonly have a scowl upon the face; the countenance is leaden-colored, and inclinable to turn pale on the slightest occasion; they are hasty in their movements, fretful, fickle, jealous, and exceedingly liable to be mistaken in their judgment of the intentions of other people. They often misconstrue a jest into an affront, and feel the keenest anguish at any omission of attention or apparent neglect on the part of those with whom they associate. Hypochondriacal people are extremely apt to imagine that they are affected with some dangerous or troublesome disease. Sometimes it will be one disease and sometimes another, when nothing ails them but the nervous affection under which they constantly labor. The heart, the stomach, the bladder, the liver, the bowels, the skin, or senses, are all fancied to be the seat of some disease in its turn; for no sooner do they get over the idea that one organ or part is diseased than they fix upon another.

The pulse is variable, and quickened on the slightest emotion, a circumstance to which their attention is often turned as an evidence that they are attacked with some new disease. But when attacked with some real disease, they commonly manifest as much fortitude as other people. The seat of hypochondrism is undoubtedly the brain and nerves. It appears to be an irritation, or a slight degree of inflammation, subject to exacerbations. It is aggravated by all unfavorable occurrences and circumstances, and lessened by good fortune and success, although it will sometimes be so severe as to render people indifferent to all the changes of life.

When we reflect in how many different ways the brain and nerves are operated upon, and the amount of wear and tear which this system sustains, we shall not be at a loss to comprehend how easy it is for the thoughts, feelings, and sensations, and the functions of other organs, to which branches of this system extend,

to become diseased. Anxiety, care, fear, expectation, disappointment, the constant exertions of attention, memory, and reflection, the uniform action of the five senses, together with the action of the will, or voluntary powers, in muscular motion or hard exercise, require a vast amount of nervous labor. Hypochondrism, or low spirits, we conceive, cannot be ascribable to a disease of the stomach or dyspepsia, as has been supposed by some. The stomach, to be sure, is affected in the same degree that the other organs are. If particular attention is paid to each and every organ in this disease, they will all be found to deviate, to a greater or less extent, from a sound state of health. The pulse evidently shows that the heart and arteries are involved in the disease, and to as great an extent as the stomach. The kidneys and liver are also affected in a similar degree. The bowels are costive, and the skin either dry and sensitive, or liable to profuse sweats. The spirits are not only sluggish, but all the functions of the body are affected in the same way. The nerves which go to the stomach partake of the disease which is common to the brain and to every nerve which issues from it. The animal spirits originate from the brain, and when they are lower or higher than common, the change is ascribable to some change in the organ. We do not mean that these remarks shall interfere with the proper regulation of the stomach and bowels in this disorder, — for on the function of digestion depends the sustenance of the whole system, — but to impress upon the mind of the reader the importance of referring the disease to its true seat.

This disease generally comes on in middle life, but appears to have no tendency to shorten the number of a man's days.

Besides a costive state of the bowels, the tongue will often be covered with a brownish fur, the sleep will often be unquiet, the head affected with various pains, the muscles will be stiff, and a soreness felt in all the flesh, especially on motion; but the most remarkable features of the disease are the sadness of the heart and countenance, the thick, deep clouds which rest upon the mind, the fear of death or of some other evil, and, where the distemper is severe, a wearisomeness of life. With many there is a strong inclination to lie in bed and to muse in solitude, or to shut themselves up at home and to avoid company. In extreme cases, people will actually become afraid to go over a bridge, or near a river, precipice or steep hill, lest they should be tempted to destroy themselves by leaping off. The fear of suicide becomes more tormenting than the fear of death in any other way. A cloudy day, a dark night, or an easterly wind, is sure to make everything look much more horrible than in clear, still weather. Windy weather, especially, aggravates the disease, and produces a more intolerable state of the feelings.

People who are unacquainted with the nature of the distemper, and the impossibility of shaking it off, will hardly allow it the title of a disease. Like other diseases, it has its remissions and its intermissions. Some people will be nearly free from it for months,

enjoy good spirits and be cheerful, and then relapse into the old state of depression again. The countenance will express a deep concern of the mind, the eye will become dull, and the face pale, sad, and sullen. Many pass the greater part of their lives in these relapses and intermissions, in sadness, tears, groans, and lamentations, or in joyous hours and gay moments.

The causes of hypochondrism, or low spirits, are over-action of the mind and a want of activity in the body. When the mind labors hard in thought and feeling, and the body remains inactive or still, this disease is very apt to follow. The laborious and active rarely suffer from it, and when it comes upon them, it is in a very mild form. Everything which teases, agitates, and harasses the mind, and annoys the feelings, for any great length of time, will disease the nervous system, and bring on the list of symptoms which we have described. Excessive study and care, or concern of any kind, long continued, end in fatigue and exhaustion of the seat of thought and feeling, and eventually in an acute sensibility of the whole system. This disease is sometimes the effect of other diseases which have been attended with a great deal of pain and watchfulness, such as fevers, affections of the digestive organs, child-bearing and nursing. It is sometimes owing to a want of food, and excessive labor of the body. Sedentary people, and those who are without occupation, are of all classes the most subject to nervous diseases.

Hypochondrism is a disease much easier prevented than cured. When our parents and our teachers shall take as much pains to produce contentment with our worldly lot as they now take to foster our pride and ambition, and when labor comes to be considered a blessing instead of a curse, hypochondrism, if not struck from the list of diseases, will become extremely mild in its nature. In our country, where labor is more reputable and lucrative than in any other, and where independence is secured by moderate exertions, nervous diseases are much less common than in Europe. Among us, however, there is enough of these diseases to arouse public attention to methods of prevention.

In hypochondrism, the senses manifest the same symptoms of functional derangement which are betrayed in the thoughts, feelings, passions, instincts, and emotions. Floating atoms are often seen before the eyes, and are the cause of much alarm, although they are indicative of nothing more than some little turgescence of the blood-vessels, or slight variation in the strength of the organ. These atoms will sometimes appear like bright sparks; and it is not impossible that they may be slight shocks of electricity or galvanism passing from or to the eye, or some change in the condition of one or the other of those fluids. There will often be a roaring in the ears like the noise of a distant carriage or a heavy waterfall. At other times, one or both ears will be affected with a ringing sound like that of a bell, and with many other kinds of noise as different from each other as there are different individuals. These sounds are slight affections of the organ of hearing, in common with

the whole nervous system, and are indicative of nothing but a want of soundness in that organ. With people who are ignorant of the cause of these noises, they are supposed to foretell sickness, death, or some great calamity in the family. The sense of feeling is no less perverted or deranged. Sometimes the person will feel as large as a hogshead, and at others, very small and light. One leg will even feel as large as the whole body, and the head will feel as light as a feather, or as heavy as lead. In some instances, everything will suddenly become dark, which will last but for a moment, and pass away.

The skin is subject to little twitches in different parts, and also to a feeling of numbness, and sometimes to a peculiar sensation, as if spiders or other insects were crawling upon it. This only shows that the skin and sense of feeling are partakers of a general disease. Both the smell and the taste in hypochondrism are somewhat diseased. The same substances will often become changed, both in smell and taste; and the hypochondriac will perceive odors and flavors where none are present. These affections of the senses are no more extraordinary than that the mind should perceive danger and disaster, mortification and defeat, poverty and ruin, where in former days all was safety, success and hope. The hysteric ball, the *aura epileptica*, and the black spots which are seen before the eyes in epilepsy, appear to be only aggravated affections of the same nature with the above.

Hypochondriacal people are subject to a kind of nervous fainting. There will appear to be a stoppage of the bowels and of the motions of life; the breathing will appear to stop, or to be carried on only by the force of the will; the body will become cold, and the skin and face deadly pale, with an indescribable anxiety and distress about the region of the heart; the action of the heart will appear to stop, and the person will feel as if dying; the senses all the while will remain quite clear, although, in general, the person is speechless. At length the heart palpitates violently, and all is commotion. The person fears the stroke of death, but it does not come. The fit passes off with some little motion in the bowels, and the passage of wind. These nervous spells are very alarming, but pass off without danger. After one of these distressing turns is over, the person usually enjoys more than ordinary calmness and serenity for several days, and sometimes for weeks and months. In time they become more supportable, but never cease to alarm.

Remedies. — If we are to name a remedy which of all others is of the greatest service, and the oftenest productive of a cure, and, in fact, without which, to a certain extent, almost everybody would become hypochondriacal, it is exercise or active occupation. The human body was made for motion, and without it soon becomes diseased. The blood cannot be sufficiently distributed and propelled into the several organs without motion. This fact may be learned by reading the article upon exercise. It is necessary that the senses should converse much with the material world. The eye should constantly be exercised in seeing the objects of nature.

the ear in hearing, and the sense of touch in feeling. The external senses are in this way strengthened and prevented from diseased action. Man is naturally a creature of sensation, and if too much occupied with thoughts and feelings and deep reflection, the brain, and the nerves which issue from it are fatigued, irritated, and rendered acutely sensitive. The mind must be fed by the senses, and not left to waste its digestive power upon its own operations. In childhood the love of motion is one of its strongest propensities; to the child motion is a luxury, a pleasure, like the taste of agreeable food or the perception of agreeable sounds. The child moves because motion gives it pleasure, by a forcible distribution of the blood. All the organs have an appetite, — a taste for blood, — and this appetite is gratified by the greater amount of blood which motion sends to them. Every nervous man should fly to some active occupation, either in the workshop or in the open field, if he wishes an exemption from suffering.

The open, fresh air is another essential means of restoring the nervous system to its original soundness and energy. The air in the best ventilated and largest rooms is never so pure, nor contains so much oxygen, which is the vital portion of it, as the open, moving atmosphere. The light also, and the heat of the sun, contribute very much to enliven the operations of the mind, to quicken the circulation of the blood, and to facilitate the evacuations. Temperance is indispensable to a recovery from this distressing affection. There can be no doubt but this disease produces much intemperance. Hypochondriacal people fly to intoxicating drinks for relief. This they obtain but for a short time; for, as soon as the effect of the stimulus is gone, they are in a worse condition than ever; but they fly to it again and again, until drunkenness becomes a habit. Cold water, exercise, or labor, and a wholesome diet, with patience and fortitude, will generally get the better of the disease, or render it tolerable.

In cases where the bowels are costive, or the stomach affected with sourness, wind and indigestion, medicine will be required. To correct the sourness, a little of the crude soda should be dissolved in water and taken as often as the sourness becomes troublesome. A little pearlash water will answer a similar purpose, though not quite as well as the soda. Where the bowels are, at the same time, sluggish or costive, a tea-spoonful of the calcined magnesia should be taken every day for three or four weeks in succession. The thoroughwort, taken daily for a length of time, has often been found of great service where the digestive organs have become involved in the disease. The elixir pro. and the aloetic pill are extremely good in such cases. A bowl of warm motherwort tea, with a tea-spoonful of the spirits of camphor in it, may be taken when the palpitation of the heart and the sensation of dying comes on. A tea-spoonful of ether, or a table-spoonful of paregoric, will quiet the commotion of the nerves. In the intervals of the nervous fits, some agreeable occupation or amusement must be followed. Journeying is peculiarly favorable to nervous complaints. Chalyb-

eat mineral waters are well adapted to strengthen the nervous system. Warm bathing is also very friendly; but cold bathing is inapplicable. A voyage to sea has cured many people, and so has a change from a sedentary to an active life. A tea made of valerian is a very suitable anodyne. Camphor, the tincture of castor, and the extract of cicuta in pills, are all serviceable in some cases. But it is much better, where the same purpose can be answered, to employ poppy tea, hop tea, and motherwort. If laudanum or opium are at any time employed, lemon-juice, or some kind of sour drink, should be taken at the same time. The Griffith's mixture, the tincture of the muriate of iron, and the rust of iron, give tone to the nervous system. Emetics are commonly hurtful. Blisters, where the head is very much affected, are sometimes employed with advantage. This disease is sometimes so severe as to make retirement and seclusion from company not only desirable but necessary. People should, however, be on their guard against becoming wedded to their chambers and retirement. The fear of mankind is a foolish fear, and attended with innumerable evils. A resolution to take the rough and tumble of the world is always well recompensed in the confidence which it produces in ourselves, and the cure of squeamishness and foolish fears which it effects.

Nothing is more necessary than that nervous people should become acquainted with the nature of their disease. A proper knowledge of it will often relieve them from much anxiety and distress. Nervous people require a good deal of food. They are always better after a full breakfast, which shows that emptiness aggravates the disease. The food should be light and nutritious, and eaten early in the day; for, as digestion is always slow in this disease, time should be allowed it to digest before the hour of sleep. Everything should be done to secure sound and refreshing sleep; for if sleep is not the staff of life, it is as essential to health as food itself. The whims and caprices of nervous people should always be treated with tenderness, kindness, and sympathy, precisely as we would treat symptoms of any other disease. It will often be necessary to be firm with such people, but their complaints and sufferings should never be ridiculed nor trifled with.

Physicians are often called in these complaints, and find it necessary to relieve the distress of this as of other diseases. If the bowels have been costive, a dose of calomel will be as good a cathartic as can be given. To quiet the nerves and to remove the apprehensions of the patient, a tea-spoonful of Hoffman's anodyne liquor, or a tea-spoonful of the tincture of castor, with the same quantity of the sweet spirits of nitre, will be advisable. If there is palpitation of the heart, a gentle opiate will be required. The Dover's powder, or the anodyne balsam, will answer this intention. The nature of their disease should be explained to them, and hopes of recovery inspired. All violent remedies must be avoided.

HYSSOP.—This herb has an aromatic smell, and a warm,

pungent taste. In asthma, coughs, and other affections of the lungs, the powdered leaves, or a tea of the leaves, are given as an expectorant. The leaves are often applied to bruises, in the form of a poultice, to alleviate the pain and restore the circulation of the part.

HYSTERICIS—*Hysteria*.—The hysterics is a much lighter disease than the epilepsy, although in some respects it resembles it. In the hysterics the person does not fall down, turn purple, and froth at the mouth, as in epilepsy, but is agitated and convulsed very much as in that disease. An affection resembling hysterics sometimes affects men as well as women.

The hysterics commonly begins with some uneasiness about the left side of the abdomen. From this spot, the sensation of a ball is often felt moving upwards towards the chest and throat. The ball seems to take several turns about the bowels, and then to ascend to the stomach, and finally to the upper part of the throat, where it produces a sense of suffocation. It has always appeared to us that the hysteric ball, or *globus hystericus*, was of the same nature with the *aura epileptica*, and the approach of black spots in epilepsy,—a hallucination of feeling, or such a perversion of feeling as takes place in *insanity*. It in all instances precedes the fit, and although a disagreeable and painful sensation, and productive of a sense of suffocation, is attended with no danger. The sensation is as fleeting as it is strange.

After the ascent of the ball, the person loses her senses, becomes wild, grates her teeth, and finally grows stupid and insensible. The muscles are violently agitated and convulsed; the clenched fist beats upon the breast, and the body is twisted into every possible position. After a little while the person will partly come to her senses, and then fall again into the same state of stupor and convulsions. The disease will continue in this way from the space of an hour to two or three days. When it continues long, there will often be lucid and quiet intervals for an hour or two at a time. In the intervals she will be affected with sobbing, crying, and involuntary laughter. On a return to the senses there is no recollection of the circumstances which attended the fit. In some females the fits are much lighter than in others. Some will scream and holloa, and be quite deranged, while others will appear still and silent. Some require the assistance of several persons to hold them, while others will have but little convulsion. The agony in some cases will be very great, while, in others, the suffering will appear to be very slight.

The fit will often come on with sickness at the stomach, palpitation at the heart, interruption of breath, and a sudden flow of the urine. After the fit has gone off, the person will enjoy a great degree of composure and serenity of mind, until the symptoms of another fit make their appearance. Some females will have these fits every month, or on the return of the menstrual discharge. The disease seldom makes its appearance before the age of puberty, and rarely ever continues longer than the menstrual sickness, and com-

mously ceases by the age of thirty-five. It originates with womanhood, and ceases on the cessation of the secretion peculiar to the female sex. To those who are afflicted with the disease, there is some consolation in the reflection that it will finally cease, and that the latter part of life may be quiet and healthy.

It chiefly attacks those of a delicate, nervous temperament, whose thoughts, feelings, and affections are easily moved. It is produced by everything which excites the mind and feelings. The sight of disagreeable objects and all painful sensations readily induce a fit of hysterics. Any disturbance of the stomach, whether from disease or food, will bring on the hysterics. But we believe the proximate cause is some derangement of the uterus and ovaria.

Of late years, this disease has been called spasms, from the agitation and distress which are manifested about the chest and stomach, and the convulsions of the limbs.

Domestic Remedies.—As soon as the disease is ascertained to be a fit of the hysterics, an emetic should be given, either of antimony, ipecac., lobelia, or some other article which is sure to excite vomiting. A great spoonful of the wine of antimony, or a tea-spoonful of the powder of ipecac., will commonly answer the purpose; but if the first dose does not vomit, a similar dose should be given again in the course of fifteen or twenty minutes. A smart vomit will often bring the person out of the fit, and prevent a return of it. If the emetic does not dissolve the fit, a tea-spoonful of laudanum, or morphine, and a tea-spoonful of ether, mixed together, should be given in a little cold water. The laudanum and ether are probably the surest remedy in use for the dissolution of the paroxysm. The dose may be repeated, if necessary, in two or three hours. Flannel cloths, dipped in boiling herbs, such as pennyroyal, tansy, and spearmint, should be applied to the stomach and bowels, and the head kept cool by the application of cold vinegar and water.

The fit may sometimes be dispelled by dashing cold water upon the face, neck, and stomach, as often as the spasms appear. When the patient is unable to swallow, the dispensation of an injection, composed of common salt, dissolved in warm water, will be necessary, if the fit is severe. A dose of oil, magnesia, salts, or some other gentle physic, should be given, as soon as the emetic has operated. All spirituous liquors should be avoided. The drink should be balm tea, cold water, and lemonade. Motherwort and catnip teas, drank freely, are both peculiarly suitable in this disorder. When it is connected with a suppression of or difficulty in the menstrual secretion, a dose of aloetic pills will be very proper, and steaming the lower part of the body with boiled herbs. At the same time, a bowl of motherwort tea, with a tea-spoonful of the spirits of camphor, should be drank, every two hours, until a profuse sweat is excited.

Professional Remedies.—When the person is taken with a fit of hysterics or spasms, it will often be advisable to take twelve or fourteen ounces of blood. Leeching is scarcely practicable in this disease, on account of the convulsions and forcible motions of the

body and limbs. It may, however, be practised over the diseased organ, during the intervals of the spasms, with much advantage. To the course which has been advised above, may be added the administration of assafoetida, castor, musk, Hoffman's anodyne liquor, poppy tea, and all those sedatives which are commonly given in nervous diseases. During the intervals of exemption from the disease the greatest attention should be paid to diet and exercise. Exercise is of the highest importance, and temperance in eating, as well as in drinking, should be tenaciously pursued. The bearing and birth of a child very often produce an entire exemption from the disease. But while lawful wedlock proves a cure to the disease, promiscuous intercourse only increases it. A course of the Saratoga spring water should be tried in all cases where the disease becomes periodical. Where the complaint arises from debility, a tonic course must be adopted. If a plethoric state exists, the system must be drained by purgatives and an abstemious diet.

I.

ICTERUS—Jaundice.—See *Jaundice*.

ICTERUS INFANTUM—Jaundice of Infants—Yellow Gum.
—See *Yellow Gum*.

IDIOPATHIC.—A primary disease. Many diseases appear to be only symptoms of other diseases, and are called symptomatic; but an idiopathic disease is one which is independent of all other diseases.

IDIOSYNCRASY.—Some peculiarity of constitution. One person will be poisoned by handling dogwood, while others will not be affected by it at all. Some people will faint at the sight of blood; and others never take the small pox, although freely exposed to it. These peculiarities, and many others, are owing to an idiosyncrasy.

ILEUM.—The lowest portion of the small intestines, or the section of the bowels between the jejunum and the colon. It is about fifteen hands' breadth in length.

IMPERFORATE ANUS.—Infants are sometimes born with this defect. The lower extremity of the bowels has no opening; of course, the child can live only a few days, without an operation by which an artificial opening is made. This has been done, and the child has lived.

IMPERFORATE VAGINA.—A complete closure of the vagina is a defect with which female infants are sometimes born. It can only be remedied by a surgical operation.

INCUBUS—Nightmare.—See *Disturbed Sleep*.

INDIAN HEMP—*Apocynum Cannabinum*.—This plant, which grows to the height of two or three feet, and is found along fences

and skirts of woods, abounds in all parts of the United States. The stems are herbaceous, erect, branching, and of a brown color. The flowers are of a pinkish or purple color, and appear in June or July. The whole plant abounds in a milky juice, and has a tough, fibrous bark, which, by maceration, affords a substitute for hemp, from whence the name of the plant is derived. The root is horizontal, five or six feet in length, of a yellowish-brown color, about one third of an inch in thickness, and is the part used medicinally. It has a nauseous, acrid, bitter taste, and, when wounded, emits a milky juice, which concretes into a substance resembling India rubber. According to Dr. Knapp, "It contains a bitter principle, extractive, tannin, gallic acid, resin, wax, caoutchouc, fecula, lignin, and a peculiar principle, upon which its activity depends, and which he proposes to call *apocynin*." The virtues of the root may be extracted by water or alcohol, but most readily by the former.

The Indian hemp is a powerful emetic, cathartic, and diuretic, and promotes sweating and expectoration. It lessens the frequency of the pulse, and induces drowsiness. The dose of the powdered root is from fifteen to thirty grains; and of a decoction, made by boiling an ounce of the dried root in a pint and a half of water to a pint, from one to two table-spoonfuls, repeated every four or six hours, until specific effects are produced. The disease in which it has been found most beneficial, and in which it has been principally used by the profession, is dropsy; although in some parts of New England it has long been a popular remedy for worms. This plant closely resembles, in appearance and properties, the dogsbane, and if not identical with it, is applicable to the same cases. We have frequently used this root in the treatment of dropsy, and in several cases with most decidedly beneficial effects. It appears to us to possess too active properties for popular use as a vermifuge; but we consider it worthy an extensive trial in the treatment of dropsies, and other affections in which a medicine of this description is indicated.

INDIAN PHYSIC—*Spiræa Trifoliata*.—This is an emetic plant, which grows in all parts of the Union. The stem rises to the height of two or three feet, of a reddish color, branched, and round. Its medicinal power resides in the root. It is a safe and efficacious emetic. The dose for an adult is about thirty grains of the powdered root. It has been used with success in the intermittent fever. It possesses tonic power, and has been used instead of the Peruvian bark. The virtues of this native plant should be submitted to further trials. It must be used with judgment, or mischief may arise from it.

INDIGO WEED—Wild Indigo—*Sophora Tinctoria*.—This plant is sometimes called broom. The stalk rises to two or three feet in height, and sends off numerous branches. It grows in great abundance in all parts of the Union. It bears a golden-colored blossom, and its leaves are small and inversely heart-shaped. The root is woody, rough, and tortuous. Its taste resembles that of

ipecac. It is nauseous, sub-acrid, and unpleasant. As far as its medicinal properties have been ascertained, it is both emetic and cathartic. A weak tea of it operates as a laxative.

It is the most celebrated for its efficacy in preventing and obviating mortification, applied as an external wash or poultice. In counteracting gangrene and mortification, in healing foul sores, and in staying the progress of ulcers in the throat, the wild indigo root is a powerful medicine. To render it effectual, a small quantity of the decoction should be taken internally, at the same time that it is used as a wash or a poultice. An infusion of the root is a good remedy for canker in the mouth, sore nipples, sore eyes, and ulcers in any part of the body. To make a poultice of it, a strong tea or decoction of the root must be mixed with rye meal, white bread, or flax-seed meal. The wild indigo is one of the most useful native plants which we possess, and its virtues cannot be too highly prized.

INFLAMMATION.—Boils or carbuncles, sore throat, and broken breasts, are all familiar examples of inflammation, and afford us the principal signs of inflammation in general. In these instances, we see that heat, pain, redness, more or less swelling, and fever, are striking symptoms. These signs, to a greater or less degree, are present in all inflammations.

There are two descriptions of inflammation. One tends to suppuration, as the common boil; exhibits a brighter red color, more hardness or tension, heat, and swelling, than the other, and is distinguishable by a throbbing instead of a burning pain; with a peculiarity still more remarkable, that it does not spread unequally, but is circumscribed, or limited to a circular or definite space. This is called phlegmonous inflammation, and the fever which attends it is inflammatory. In general, it either subsides, or ends in suppuration and a discharge of matter; but sometimes terminates in gangrene, scirrhus, or hardened flesh.

The other description of inflammation manifests a duller red color, a slight or scarcely perceptible swelling, a burning instead of a throbbing pain, spreads in any and every direction, and ends in watery blisters and scales which peel or drop off. This is called erysipelatous inflammation, and the fever which attends it is generally typhus or typhoid. It either subsides or ends in blisters and scales, or in gangrene. St. Anthony's fire is an erysipelatous inflammation.

INFLAMMATION OF THE BLADDER—Cystitis.—The first symptom in an inflammation of the bladder is a difficulty in making water. There will be a sense of fullness and distention, and a pain in the lower front part of the abdomen. Sometimes there will be a complete stoppage of the water, or there will only be a few drops passed at a time. There is an incessant desire to urinate, without the power. This disease runs its course very quick. If relief is not obtained speedily, the disease runs into mortification of the bladder, and destroys the patient in a few days. Pain, heat, soreness to the touch, sickness at the stomach, thirst,

and restlessness, go to make up the complement of symptoms which characterize the disease.

If the bladder is full and distended, the water must be drawn off by the catheter. It is of the greatest importance that this circumstance should be attended to, lest a mere distention of the bladder should bring on mortification. The patient should not be allowed to drink more liquids than are absolutely necessary to quench the thirst, and no medicine should be given to increase the amount of urine, lest the bladder should suffer by distention. Water, moderately cool, will be as proper a drink as any. An inflammation of the bladder will sometimes end in suppuration, and the matter will be discharged with the urine, giving it a cloudy appearance. If the matter is discharged into the abdomen it will occasion death.

Blood-letting in this disease is indispensable. Leeches should be used freely. The bowels should be drained by mild purgatives, a perspiration should be supported, and warm emollient injections into the rectum should be repeated very often. The warm bath, either general or topical, will be found of essential service. The inflammation is often produced by taking the tincture of flies, and the use of blisters; by intemperance, and sometimes by taking cold; but, in general, it is produced by gravel stones in the bladder, and is relieved when these stones are discharged in the water. Where blisters are the occasion of the disease, it will be relieved by simply taking sweet spirits of nitre, and sprinkling the blistered part with powdered camphor.

In this disorder there is intolerable restlessness and anxiety, with cold extremities, vomiting, and often delirium. Too much attention cannot be paid to drawing off the water, and facilitating the passage of the gravel stones where any are present.

INFLAMMATION OF THE BOWELS OR INTESTINES—Enteritis.—An inflammation of the intestines and the colic are not the same disease. There is a settled, obstinate fever in an inflammation of the intestines, and a great deal of soreness upon pressure; in this disease the pain is fixed; in colic it is shifting. In this, the pulse is quick and hard; in the colic it is quick, but not hard.

An inflammation of the intestines begins with nausea and sickness at the stomach, loss of strength, costiveness, great anxiety, thirst, heat, and an intolerable pain in the belly, which extends all over it, being the most severe about the navel. In a short time, the whole belly becomes extremely tender and sore to the touch, and the pulse is quick, hard, and small.

If the large intestines, or the lower portion of the bowels, are the seat of the inflammation, the stomach is not apt to be so much affected. The seat of the inflammation being at a considerable distance from that organ, it will often remain comparatively quiet. There will merely be a slight nausea and vomiting at long intervals. In fact, the degree in which the stomach is affected is a pretty good criterion of the nearness or the remoteness of the inflammation from that organ. If the sickness is severe and the vom-

iting constant, we may be pretty sure that the small intestines are the inflamed portion, and that the more danger is to be apprehended. We have sometimes thought that we could tell the spot in the intestines which was inflamed, by the length of time in which the drinks, food, and medicines remained upon the stomach before they were thrown back. This may not be an invariable guide, but we conceive it to be a very good one.

Where the symptoms are present which we have described, we should always inquire whether the person so affected has a hernia or rupture. A small rupture will sometimes become strangulated, and a portion of the intestines inflamed, without the knowledge of the person who is the subject of it. It is said that some females have had small ruptures even without their own knowledge, and died of a disease which might have been remedied.

If the inflammation is not reduced either by the efforts of art or nature, it must speedily end in mortification, or suppuration and ulceration. The evidences of mortification are a ghastliness of the countenance, a cessation of the pain, a swelling of the bowels, a disappearance of the pulse in the wrist, and a cold clammy sweat. The evidences of a suppuration are cold chills, an abatement of the fever, and the mixture of pus with the discharges from the bowels.

An inflammation of the intestines is very apt to be produced by cold, wet feet, and by excesses in eating. Shell-fish, cucumbers, and unripe fruit, are fruitful causes of the disease. It is brought on by extreme costiveness, strangulated hernias, and the running of one portion of the bowels into another. Corrosive substances taken into the stomach, or any indigestible body lodged in the bowels, may give rise to the inflammation. It is almost always the inner or mucous coat of the bowels which is the seat of the inflammation, but in some cases the outer or peritoneal coat will be the surface first inflamed. But where either one or the other coat is first inflamed, the whole thickness of the intestine is finally involved in the inflammation; and where ulceration takes place there are almost always found holes through the intestines.

Domestic Remedies.—Neither emetics nor purgatives are proper medicines to give in the commencement of this disease. The only thing which can be done to much advantage by the family and friends, is to make warm applications to the bowels, and to give warm demulcent drinks. The feet may be bathed in warm water, and the lower portion of the bowels emptied by a warm emollient injection. Flax-seed tea, mullein tea, and gum-arabic water, are the most suitable drinks.

Professional Remedies.—Perhaps there is no disease in which a free abstraction of blood is so essential as in this. The smallness of the pulse is no objection to bleeding, if there are other evident signs of inflammation, such as pain, soreness, and fever. In inflammations of the lungs and of the liver, the pulse is full and large; but when the intestines are inflamed, the pulse is small, though quick. There never can be any hazard in bleeding where

there is great pain, soreness, and fever. Many lives have no doubt been lost from a fear of letting blood in this disease. It may often be necessary to bleed copiously as many as three or four times in the course of the first twenty-four hours; and, besides this, to apply leeches freely to the abdomen.

"In an inflammation of the intestines," says Dr. Thomas, "as well as all visceral inflammations, there cannot be proposed a more useful rule than that of drawing blood every four or six hours, in such a quantity each time as the action of the heart will bear, and continuing the practice as long as the characteristic symptoms of inflammatory disease remain. In inflammations of the brain, of the pleura, of the lungs, of the heart, of the liver, and of the bladder, the same practice will be advisable." This advice should be well heeded.

The belly should be well steamed with cloths dipped in hot water, and with warm emollient poultices. After the force of the circulation has been reduced, and the fever abated, blisters should be drawn upon the abdomen. After the reduction of the pulse, the most appropriate cathartic which can be used is calomel, in three or four grain doses every hour. If the stomach will retain them, effervescing draughts should be given, especially the Rochelle powders. Where medicines are constantly returned by the stomach, the administration of injections will become necessary. After the bowels have once been opened with medicine, a constant action should be kept up by the use of mild purgatives, such as the Rochelle powders, jalap, and the cream of tartar, or the butter-nut physic.

The mercurial ointment rubbed into the abdomen, where the stomach retains nothing, should be tried. The iodide of mercury in grain doses has lately been recommended.

The affusion of cold water upon the abdomen has been sometimes of service in reducing the inflammation. This should always be done in a very early stage of the disease. Opiates should never be given until the system has been reduced by bleeding and the lapse of time. If given in the commencement, they only aggravate the disease, although they may obtain a truce from the pain and distress. But after suitable evacuations have been made, the Dover's powder or the acetate of morphia may be given, combined with calomel or some other cathartic. In cases where suppuration has taken place, and symptoms of hectic appear, the strength must be supported with quinine, the mineral acids, and wine whey. Chicken broth and beef tea should be taken for food, and every effort made to produce comfort where we may despair of a cure.

INFLAMMATION OF THE BRAIN. — See *Brain Fever*.

INFLAMMATION OF THE BREASTS. — This disease seldom or never happens unless it has been preceded by childbirth. It most commonly happens about the time of the appearance of the milk, but may happen at any time while the woman is nursing. The inflammation commences with chills and heats; head-

ache; a full, quick, and hard pulse; thirst, and, when vehement, with sickness at the stomach, a hot and dry skin, with scantiness of urine, and a confined state of the bowels. In fact, in this, as in other inflammations, all the secretions are more or less dried up by the fever.

In a short time, cakes or lumps will be felt in one or both breasts. In some instances the cakes will occupy one half of the breast, and in other instances the whole of it. Not unfrequently the whole breast will be uniformly swelled and hard. Some time will commonly elapse before the breasts become red and very sore; but if the inflammation is not subdued, they ultimately become red, and often, though not always, painful, suppurate, and discharge a great quantity of pus, sometimes thick, and at others thin and watery. If the inflammation is not subdued before the sixth or seventh day, it commonly ends in suppuration. The fever and disturbance of the system often commence before any hardness and swelling are detected in the breasts; so that the breasts should always be well looked to in case any symptoms of fever arise, especially after the puerperal discharge or lochia has ceased. This disease is generally the consequence of taking cold, or of neglecting to draw the breasts. It is sometimes produced by the constant irritation of sore nipples.

It should be the first object to produce a profuse sweat, which will often of itself carry off the cakes and dispel the inflammation. The breasts should be constantly steamed with cloths dipped in hot water, or, which is better in the first instance, alcohol or new rum. If the inflammation is very vehement and the force of the pulse much augmented, blood must be drawn by leeches or opening a vein; but this is not often needed.

The breasts should be kept empty, either by nursing or the breast-pipe, and no food should be taken which will increase the quantity of milk. A common decanter filled with hot water, wrapped with a woollen cloth, and then suddenly emptied and applied to the breast, will answer for a pretty good breast-pipe. But the best of all ways, — where anybody can be found to do it, and it is an act of great kindness, — is to draw the milk by the mouth. It is much less painful and irritating, and abundantly more effectual. The bowels should be drained by the use of salts, magnesia, Rochelle powders, castor-oil, and jalap; and the kidneys kept free by the use of the sal nitre, in six grain doses. After the breasts have been steamed for about twenty-four hours, a warm, soft white bread, rye-meal, or flax-seed poultice should be applied, and renewed as often as it loses its moisture. The solvent power of a poultice, in inflammations of any considerable depth, is, in our opinion, superior to all other local means. Warm applications should always be tried before cold ones. After the fever has somewhat abated, if the redness, hardness, and swelling continue obstinate, the sugar of lead, or the white vitriol, dissolved in tepid water, may be tried. The water may gradually be made colder until it is used entirely cold.

The perspiration is best kept up by the use of the antimonial powder, the spirits of camphor, the sweet spirits of nitre, the acetate of ammonia, and small doses of ipecac. or lobelia. A solution of the tartrate of antimony, frequently repeated, in small doses, will operate both upon the skin and the bowels.

The volatile liniment and the spirits of camphor, applied in the commencement of the cakes, will sometimes soften and dispel them. But unless they are applied in such profusion as to produce a perspiration, they have never appeared to us to be very solvent. A common application in the country is to fry a woollen or linen cloth in hog's fat, and spread it upon the breasts hot, or rather, very warm. This probably operates upon the principle of raising a perspiration in the parts, and sometimes upon the whole skin. Our reliance has always been upon steaming and poultices.

In some instances where there is no fever, and the cakes remain nearly stationary, a plaster of white diachylon will scatter them. But sometimes, in spite of all remedial opposition, they will come to a head. In this case, after the matter is fully formed, it is better to open them with the lancet than to allow them to break. By opening the tumors, they are less liable to form a ragged, open sore. The lowest side of the tumor should always be selected to make the incision.

The drink should be tepid, and composed of sweetened water, balm tea, gruel, and bread-water. Sour drinks are inadmissible while the patient nurses, on account of the child. The room should be kept comfortably warm, and no more; too much heat increases the inflammation. To procure sleep and respite from the pain, the Dover's powder, or the sulphate of morphia must be given as often as the case demands. Opiates are attended with much less danger in an inflammation of the breasts than in that of the more vital organs. They are, however, improper in the commencement of the disease, and always when the fever is high.

INFLAMMATION OF THE BRONCHIA — Bronchitis. —
See *Bronchitis*.

INFLAMMATION OF THE EYES — Ophthalmia. — Inflamed eyes begin with an itching sensation, a feeling of dryness and stiffness of the eyelids, soreness, pain, and swelling. The eyes are hotter than common, and the eyelids are glued so fast together in the morning that it is sometimes difficult to get them open. The eyelids become red, and if the inflammation is severe, it will extend to the eyeball; the whites of the eyes will become as red as the eyelids and as much engorged with blood. There will be a deep-seated pain in the eyeball, and sometimes in the head. This inflammation is not accompanied with much fever, unless it occupies the whole eye. After the inflammation has extended to the ball of the eye, the retina or the optic nerve becomes sensitive, and light is extremely painful. In the worst cases the eye becomes completely closed, and when the eyelids are opened and

the light let in, it sets the eye to running, and produces a pain which scarcely can be borne. If the inflammation is not speedily reduced, matter is soon secreted, which is often so corrosive as to excoriate and scald the cheeks as it runs down. The cornea, being destitute of visible vessels, commonly remains clear for some time; but if the disease continues long and severe, it becomes cloudy, and at length red. Very often, little white ulcers will be seen upon it. If the inflammation is violent, and extends to all the membranes and different structures of the eye, a general fever will be created. The patient will be dry and hot, the pulse quick and forcible, all the secretions more or less diminished, and there will be neither rest nor sleep.

Sore or inflamed eyes are produced by several different causes. Some people will have weak eyes from birth, seldom free from redness. This is owing to a scrofulous habit. An inflammation of the eyes, like other inflammatory diseases, is sometimes an epidemic. It has been known to prevail in certain states of the atmosphere almost as extensively as the epidemic influenza. Cold, dry, windy weather is more apt to produce an inflammation of the eyes than calm cold weather. The disease will, however, prevail in hot as well as in cold weather. It is often produced by chilly, misty weather. Intense light will produce it. Too long and constant use of the eyes in reading or study is a very common cause of inflamed eyes. The eyes of farmers, in the hottest weather, will almost always look blood-shot and slightly inflamed. In Egypt, the disease prevails constantly, from the heat and light of the sun, and from the sand which is constantly blowing into the eyes. The effects of both the heat and the light are increased by the reflection from the glittering sand-banks and the sandy desert. Nearly all strangers are attacked with it, and some are made blind.

Smoke, and the fumes of chlorine used in bleacheries, and the evolution of other gases, often inflame the eyes, but probably the majority of cases are produced in the same way that other inflammations are, by sudden changes of the atmosphere and the suppression of the perspiration. The cases which are produced by particles of dust, sand, iron, &c., are comparatively small.

In children, it is apt to arise from inflammatory affections of the skin, which often appear to extend to the eyes. Running sores behind the ears and about the head, particularly the scald-head, are apt to extend to the eyes, and to produce protracted and serious mischief. Where the skin is pale, and the blood thin and watery, and the child reduced by teething and the bowel complaint, if there are any open sores about the head and face, the eyes often partake of the same affection. Some of the worst cases which we have ever seen have originated from this habit of body.

When the disease becomes protracted, it is called chronic ophthalmia. In this state it will often continue for many weeks, and even months. In what are called weak eyes, which almost always look red, and run more or less, the sebaceous glands,

situated in the edges of the eyelids, are inflamed. The inflammation, in this case, is aggravated on the slightest occasions of exposure to the hot sun, or the light of rooms in the evening. The least indulgence in wine, ardent spirits, or heating food, is sure to render it worse. The greatest personal beauty is often disfigured by this unsightly disease. No pains should be spared, and no habits of austerity in living avoided, which will effect a cure. We believe it to be in all cases curable, if the right means are adopted and steadfastly persevered in. This disease is thought to be contagious; insomuch that looking long at a person whose eyes are affected is supposed by many sufficient to communicate it. This we think very doubtful. No class of people see more of sore eyes than physicians, and we have never known the disease to be taken in this way. Where the matter taken from one person's eyes has been rubbed into the eyes of another, the disease may have been produced; but we do not believe it was ever communicated by looking at the eyes oftener than in looking at any other object. Intensely looking at any object may disorder the eyes.

Ophthalmia is an affection which attacks the eyes of all ages, and both sexes. In most cases it is a mild disease, and of short duration, but in some it is violent, and calls for the most prompt and active treatment.

Domestic Remedies. — It is very difficult to do anything for inflamed eyes, unless the person can be kept from the light and the use of the sight. The constant action of the eyes and exposure to the light increase the inflammation in a greater degree than it can be allayed by any treatment which can be pursued. Unless, therefore, the affection is very slight, the person should be confined to the house and excluded as much as possible from the light. All reading and fine work must be abandoned, and the eyes kept as still as possible. The eyes, in an inflamed state, require rest as much as a broken limb. The inflammation should be dispelled as soon as possible, or it may run into a chronic disease, or an ulceration and suppuration of the several structures of the eye. Whenever the whites of the eyes become deeply inflamed, and redness begins to appear in the cornea, we may be sure that the disease is attended with danger.

The best application which can be made to the eyes in the beginning of an inflammation is water slightly warmed. It should be about a degree or two cooler than the heat of the body. If the water is warmer than the body, it may increase the inflammation, or if it is very much colder than the temperature of the body, it may have the same effect.

We must avoid any great contrast between the temperature of the water and that of the eye, or we may do more mischief than good. The efficacy of cold applications, in our opinion, depends upon the degree of cold which we employ. Water of the temperature of ninety-two or three degrees we call a cold application, as it is colder than the body. The heat of inflamed eyes is proba-

bly never less than a hundred degrees; so that water of the temperature of ninety-five degrees may be considered a cold application. The eyes should be kept continually soaked with water, and if rain water can be procured so much the better, as it is much more solvent than well water, which is already saturated with several ingredients. The person should lie back in a chair, and the eyes should be covered with folds of soft linen soaked in water of the temperature we have named. Every hour the water should be made about a degree colder, until it is used entirely cold. If the temperature of the water is gradually lowered, it may finally be used of the temperature of ice, or cakes of ice may be used instead of water. But on no account should ice, or water as cold as ice, be used in the first instance. One of the worst inflammations of the eyes which we ever have seen was cured by the process which we have described, after one bleeding at the arm and the application of a dozen leeches. The effect of cold in reducing inflammation is very great, if properly used; but it must be used with great constancy, and graduated nicely. It is as improper to use very cold water to the eyes in the beginning of an inflammation, as it is to use very strong solutions of lead and zinc.

In slight cases, where only the eyelids are inflamed, abstinence from animal food, soaking the eyes in water, and a dose of salts or some other purgative, will be all the means required. If, after the lapse of two or three days, the inflammation is not dispersed, eight grains of white vitriol, or a piece of the size of a kidney bean, may be dissolved in four ounces of rain or spring water, or, which is better still, rose-water, and applied to the eye continually until the soreness is gone. Everything depends upon the constancy of the application. If much time is suffered to elapse between the applications, the affection progresses faster than it is subdued. If the white vitriol does not succeed, a solution of the sugar of lead of the same strength may be used. The strength of these washes should be increased a little every two days; an increase of one grain to an ounce of water will be enough. When the inflammation is deeper seated, and the ball of the eye is involved and the sight obscured, bleeding by leeches or cupping, or by opening a vein, must be practised. Indeed, the inflammation must be reduced by the same means which are employed in similar affections of other parts. The diet must be low, and the drink nothing but water, lemonade, or soda powders. Every species of stimulating drink and high-seasoned food must be avoided. After the violence of the disease has abated, blisters should be applied to the back of the neck, or to the arms, small doses of the wine of antimony given to raise a sweat, and sal nitre and the acetate of ammonia to free the kidneys. The Epsom salts, cream of tartar, magnesia, or the Rochelle powders, should be given every day, to operate upon the bowels. Poultices are sometimes very good, if often changed.

Professional Remedies. — In an acute inflammation of the eyes,

the physician should never hesitate in drawing blood until the countenance of the patient becomes pale; and the operation must be repeated a second or a third time, if the case should require it. There can be no better local applications for recent inflammation than those we have recommended. In chronic inflammation, an eye-water composed of one part of the wine of opium and two parts of a solution of two grains of white vitriol to an ounce of water, may be used. Dividing the superficial, engorged blood-vessels on the inside of the eyelids, or cutting across them in five or six different places with a small scalpel, will often effect a complete cure. One of the authors, C., lately treated a case of six months' standing in this way with complete success. To this case S. was witness. If there should be an ulceration of the cornea, the ulcer may be touched with a little calomel, or with the lunar caustic. Alum-water made weak at first, will sometimes succeed better than preparations of lead or zinc. Where a scale is formed over the cornea, a little loaf sugar powdered fine, or calomel, may be blown into the eye. A seton in the neck is often serviceable, and if the system is redneed, quinine or the Griffith's mixture should be taken. A course of the Saratoga spring water should be tried where other means fail.

INFLAMMATION OF THE HEART — *Carditis*. — In an inflammation of the heart, the most striking symptom is a disposition to faint every few moments. The countenance is ghastly pale, inclining to yellow, the pulse quick, small, and intermitting; there is great restlessness and anxiety, a panting for breath, and coldness of the extremities. We have seen two well marked cases of this disease unaccompanied with any symptoms of peripneumony or affections of other organs. Recovery took place in one case, and death in the other. In the fatal case there was a slight, dry cough, but no symptoms of peripneumony. There was no expectoration either of bloody or mucous matter, or any other sign which indicated an inflammation of the lungs. In both cases the patients were constantly turning and tumbling. We witnessed no particular palpitation, which has been described as a symptom of this disease.

It is said, by those who are familiar with the use of the stethoscope, that a peculiar sound, resembling the sound of a bellows, can be heard when the lining of the cavities of the heart are inflamed. The French call this sound the *bruit de soufflet*. We suspect that the heart is much oftener the seat of inflammation than medical men are accustomed to imagine.

The main remedy in an inflammation of the heart, and of the heart-case, which cannot be well distinguished from each other, is blood-letting. The fainting and other signs of prostration should not deter us from the free abstraction of blood whenever we become positive that the heart is inflamed. It will often be necessary to repeat it two or three times. If opening a vein is objectionable, leeches or cupping should be employed. Blisters should be used freely and all those medicines which reduce the

force of the circulation, such as digitalis, antimony, ipecac., and lobelia, in small doses. The bowels should be drained by salts, calomel, and other cathartics, and a perspiration raised by the use of the antimonial powder, the acetate of ammonia, and the sweet spirits of nitre. Opium in any form is inadmissible. Hoffman's anodyne liquor can be used in its place.

An examination of the heart after death shows the same signs of inflammation which take place in other organs. The lining of the heart-case is of a very deep, dark-red color, and sometimes ulceration is discoverable. The heart often discovers a softening of its texture; this will take place to such a degree that the whole of the lining membrane can be scraped off with a knife. An inflammation of the heart terminates in suppuration, ulceration, and dropsy. The heart is supposed to be very often the seat of rheumatic inflammation; but this appears to us to be rather conjectural than founded on observation and fact.

A chronic inflammation of the heart is manifested in the same way with an acute inflammation, only that in the former the symptoms are milder and more tolerable.

INFLAMMATION OF THE KIDNEYS—Nephritis.—Like most other inflammatory diseases, an inflammation of the kidneys generally commences with cold chills and rigors, particularly in the back and loins, followed by fever and pain of greater or less intensity. The pain though sometimes obtuse, is commonly severe and lancinating, and frequently extends to the bladder, loins, and even to the thighs. It is increased by pressure, motion, straining, and by taking a full breath. There is a sense of increased weight felt about the lumbar regions, and a sensation of heat, gnawing and constriction, in the loins. The urine, if not entirely suppressed, is very scanty, high-colored, and voided drop by drop, and occasionally bloody. In some cases there are faintness, nausea, bilious vomiting, oppression at the stomach, hiccough, tympanitic distention, and rumbling of the bowels. There may be constipation of the bowels, or a diarrhœa with tenesmus. A very constant symptom in this affection is a numbness and retraction, or drawing up, of the testis on the affected side. The pulse is frequent and hard, there is headache and restlessness, the skin is hot and dry, and the tongue furred. Sometimes, instead of being dry, the skin is covered with perspiration, having a urinous smell. The persons most subject to inflammation of the kidneys are those who are frequently troubled with gravel, gout, rheumatism, lumbago, and eruptions of the skin. Intemperance, the frequent use of cantharides and other diuretics, sudden changes in the weather, the recession of eruptions of the skin, external injuries, inflammation of the urethra and bladder, and the irritation caused by the presence of a calculus in the kidneys or ureters, are some of the most fruitful exciting causes of the disease.

Notwithstanding the intensity of the pain and fever that sometimes attends this disease, it is rarely fatal in its acute stage. It sometimes terminates in suppuration, but the abscesses are not

usually very extensive. When the quantity of matter is small, it may escape into the cavity of the kidney, and thence into the bladder, and be discharged through the natural outlet. In those cases in which the quantity of matter is very great, a complete destruction of the kidney, and dangerous symptoms, may be the consequence; though it is rare for the abscesses to break into the abdomen, or to point externally. Suppuration is indicated by a subsidence of the more violent symptoms, a throbbing sensation, and a sense of weight, with alternate chills, flushes of heat and profuse sweating. Should the disease become chronic, in consequence of not being completely subdued during the acute stage, induration and disorganization of the kidney may be the result; nor is it unusual for the kidneys in these cases to be converted into a mass of hydatids, giving rise to general or local dropsies, by diminishing or entirely preventing the secretion of urine. We have witnessed some deplorable cases of this kind, which terminated in dropsy of the brain and other parts, and in which scarcely a vestige of the kidneys remained, being converted into a mass of hydatids and corruption.

Domestic Remedies.—The principal, and decidedly the most potent, domestic remedy for inflammation of the kidneys, is warm bathing and fomentations. The feet should be thoroughly bathed in hot water, rendered more stimulating with mustard or salt; after which the patient should be put into bed, and the back and sides over the region of the kidneys be fomented with large woollen cloths, wrung out of water as hot as can possibly be borne. In applying hot stoupes, in cases of this kind, it is necessary that they be frequently changed, keeping up the heat and moisture constantly, in order to derive from them the greatest benefit. A hot mustard poultice, applied over the seat of the disease, and changed every hour, will have an effect similar to the fomentations, and may be used if preferred. Putting the patient into a warm bath is also a valuable remedy, but is not to be preferred to fomenting the diseased part. Whichever may be tried, it should be persevered in until the pain is relieved, after which, warm, dry flannel should be substituted, to prevent the patient from taking cold. The bowels should be opened with Epsom salts, or jalap, and cream of tartar, and copious injections of warm water, or decoctions of emollient herbs. Injections are peculiarly appropriate in this disease, affording great relief as a local bath, besides aiding in procuring evacuations from the bowels, and they should never be omitted. The drinks should be warm flax-seed, slippery-elm, and balm tea, and gum-water, to which may be added a little cream of tartar.

Professional Remedies.—Perhaps there is no disease in which prompt and energetic treatment is more necessary than in this; and as it is highly inflammatory, our chief reliance must be upon depletion. Early and copious bleeding, both general and local, is the only agent upon which we can confidently rely. One or two bleedings from the arm should be practised, and if the pain and

other urgent symptoms are not relieved, blood should be drawn from the back and loins, by cupping, if practicable; if not, by leeching, to an amount sufficient to subdue, or very much alleviate, the pain. Opium, in some of its forms, hyoscyamus, cicuta, or some other anodyne, is sometimes indispensable, and should be given in combination with antimony, or ipecac., to an extent sufficient to put the system under its influence and mitigate the sufferings of the patient. Nitrate of potash and the spirits of nitre, in small doses, combined with antimony, are valuable auxiliaries, but irritating diuretics are inadmissible. When the disease is caused by gravel, and the inflammation has been in some measure subdued, twenty drops of the liquor potassæ, largely diluted with flax-seed and upland cranberry tea, will be found one of the most valuable remedies. Should the disease become chronic, it must be treated according to the character it may assume. Counter irritation, with tart. emetic ointment, or a galbanum plaster; the balsam copaiva, or white turpentine, in small doses; an abstemious diet, temperance, and a regular habit of body, may contribute to a cure.

INFLAMMATION OF THE LIVER — Hepatitis. — The symptoms of an inflammation of the liver are an acute pain in the right side below the chest, frequently extending to the chest and the right shoulder. This pain is more distinctly felt by breathing, coughing, and in lying on the left side. If the right side is pressed with the hand, a soreness is felt, and the pain becomes sharp. The pain in the right shoulder is an equivocal symptom, and not to be relied upon unless combined with the other signs of inflammation. The pulse is full, hard, and strong, the bowels are costive, and the stools are ash or clay colored, owing to the absence of the bile, which has ceased to flow. It is the bile which gives the yellow color to the contents of the bowels, and when the liver is inflamed, the bile is not secreted, or but partially secreted, and the stools are deprived of their coloring matter. The bile is also physical or cathartic in its nature, and its absence leaves the bowels costive. In this disease the urine and the skin are of a deep-yellow color, and the whites of the eyes are also deeply tinged with the same color. The disease is, however, different from jaundice, inasmuch as no symptoms of fever exist in that disease, but in this there is a permanent state of fever. The perspiration will often be so yellow as to stain the linen. The tongue is coated with a yellow fur, the mouth is dry, the skin is hot, and there is constant thirst.

In some instances the stomach and bowels will partake of the inflammation, and when this happens, there will be sickness and vomiting, and prostration of the strength. There is, commonly, more or less of a dry cough in inflammations of the liver. In some cases there will be a swelling over the liver. If percussion is used, the liver gives a dull, heavy sound; but when the inflammation has subsided, the sound will become elastic and lively.

There is a chronic inflammation of the liver in which the same

symptoms are all present, but less violent, and longer in duration. The same treatment is also necessary, but less active. Less blood should be taken, and less medicine used. The fever will be less in chronic inflammation, and there will be less call for powerful remedies.

If the inflammation is upon the surface of the liver, or in the coat which covers it, the pain will be sharper and more perceptible on pressure than when it is deep-seated. In all deep-seated inflammations the pain is more dull than when the superficial parts are inflamed. Like other inflammations, an inflammation of the liver may terminate in mortification, in which case it is fatal; in suppuration, in which case it may break outward and recovery possibly take place, or break inwardly and death take place. The inflammation may be resolved or reduced, in which case a perfect recovery takes place. This disease is chiefly prevalent in hot climates. With us, cases of it are extremely rare. It is occasioned by excessive heat and sudden changes from hot to cold weather. Any of the causes which operate to produce inflammation in other parts of the system may produce an inflammation of the liver. Probably the passions of the mind often produce the disease; and intemperance is a fruitful cause of it. Temperance and evenness of temper are, therefore, golden habits, which are worth great pains to cultivate.

Domestic Remedies. — In inflammatory diseases, but very little can be done to advantage in a domestic way until the system has been reduced by blood-letting, and the circulation of the blood moderated by the use of medicines which are known to accomplish this purpose. In cases where bleeding cannot be performed either by leeching, cupping, or opening a vein, small doses of antimony, ipecac., or lobelia should be given, which shall cause a little nausea, but not vomiting, which is always injurious to the disease. A quarter of a grain of tart. antimony, dissolved in hot water, should be given every hour, until the pulse is moderated and a sweat produced. Thirty drops of the wine of antimony or of the wine of ipecac., or a tea-spoonful of the tincture of lobelia, may be given instead of the solution of antimony. A dose of Epsom salts should be given every other day; and, after the pulse is reduced in force and frequency, a large blister should be drawn over the place of the liver. This should be succeeded by a second or a third, if the pain and fever are not removed. After the blisters come off, a large, soft, warm white-bread or rye-meal poultice should be placed over the drawn blister, and renewed as often as it gets at all dry and hard. Eight grains of the antimonial powder should be given as soon as the nauseating doses are omitted, in order to keep up a lively perspiration. The nitrate of potash, — saltpetre, — in doses of six grains, once in three hours, will assist greatly in the reduction of the inflammation, by operating upon the kidneys. Indeed, all inflammations are very much lessened by the flow of a great quantity of urine. The skin, kidneys, and bowels, should always be kept well open. Sometimes a profuse perspiration will dispel an

inflammation, and in other cases a great flow of the urine, or a full draining of the bowels, will accomplish the same thing. All heating herbs, and medicines which produce sweating by their heating properties, are unsafe. Emetics are improper. No herbs should be given but those which reduce the force of the pulse, and assist either the perspiration, the water, or the motion of the bowels. It would be more proper to give the foxglove in small doses than to give the hot-drops in an inflammatory disease.

Professional Remedies.—Nothing is of more importance in inflammatory diseases than to properly time and graduate the operation of bleeding. In the hands of the unskilful, blood-letting may be an unsafe remedy, but in the hands of the skilful it has saved thousands of lives. Judgment and experience in this operation will prove a safe guide, as in everything else. If the force of the circulation is great, and the violence of the disease threatening, even two or three bleedings may be necessary; but in ordinary cases, one or two bleedings, with leeching, will prove as much as will be safe.

In an active inflammation, the use of calomel is seldom necessary; but in a chronic inflammation, this medicine, in small doses, continued until a coppery taste is produced in the mouth, is often productive of the best effects. Salivation should never, and need never, in this disease, be produced. The moment the taste of the medicine is perceived in the mouth, the medicine should be omitted until the taste is gone, and then renewed again, if necessary. The employment of the mercurial ointment over the region of the liver has often been advantageous. The blue pill and cicuta, in doses of two grains each, made into a pill and taken twice a day, is a common and excellent medicine. Frictions with the nitro-muriatic acid over the liver and stomach, and a foot-bath of the same, have of late been highly commended, and we have used both with marked advantage. The acid should be so weakened with water as to produce only a slight irritation, and employed, twice a day, for ten or fifteen days in succession.

Drink acidulated with nitro-muriatic acid diluted with water has been highly recommended. Equal parts of nitric and muriatic acid diluted with water, and then used like the elixir vitriol to sour the drink with, is the way in which the medicine should be used.

INFLAMMATION OF THE LUNGS OR LIGHTS—*Peripneumony.*—See *Peripneumony*.

INFLAMMATION OF THE PERITONEUM—*Peritonitis.*—This is a disease of the extensive membrane which lines the inside of the belly, to which the bowels are attached, and a process of which also forms the omentum or apron. In an inflammation of this membrane, although it is situated in the cavity of the belly, and although it covers the external surface of the bowels, the proper action of the bowels is not very much disturbed. In this respect the disease differs very much from an inflammation of the bowels, or enteritis, and from the colic. Neither is the stomach apt to be much affected in the first stage; but in the second, a vomiting or

belching of a blackish or coffee-ground matter is a common symptom, and indicates imminent danger. The pain and soreness in this disease are felt more upon the surface of the belly than in any inflammation of the bowels. The pain is often very sharp and distressing, and the soreness over the whole abdomen extremely great. The surface of the belly is tense and sometimes swelled. In men there is not apt to be much swelling, however, unless the apron is inflamed, in which case the swelling is in the upper part of the belly, just under the pit of the stomach. If the inflammation is in that part of the peritoneum to which the bowels are attached, the pain and soreness will be deeper seated, and the surface of the belly less sensible to the touch. The skin is hot and dry, and the pulse small and quick; the countenance indicates constant pain; and the legs are drawn up to relieve the tension of the abdominal muscles. Every long breath produces pain in the abdomen, so that the breath is constantly cut short.

The bowels will sometimes be costive and at other times loose, but in many instances they will not be essentially disturbed, or not more disturbed than they are in a fever or in other inflammations. The pain and soreness are much greater than ever take place in a diarrhœa, and the obstruction much less than takes place in an inflammation of the bowels. It is a disease longer in its duration than enteritis. It will not, therefore, be very difficult to distinguish it both from an inflammation of the bowels and from diarrhœa.

Domestic Remedies.—Small doses of ipecac., antimony, or of lobelia, to relax the pulse and to raise a moisture upon the skin, will be perfectly proper. A large poultice of white bread, rye meal, or flax-seed meal, should be applied to the belly, and often renewed. Lemonade, soda-water, and sweetened water, are appropriate drinks, and Indian gruel, toast-water, and barley gruel, a suitable diet. A dose of butternut physic, salts, magnesia, castor-oil, or cream of tartar, should be given every day, unless there should be a looseness of the bowels. It is of the greatest importance to keep up a moisture upon the skin without the use of medicines or drinks which increase the heat and the force of the circulation. The kidneys should be kept free by the use of cream of tartar for drink, or the sal nitre. In all deep-seated inflammations, bathing the feet in hot water, twice or three times in twenty-four hours, and applying to them stimulating poultices, will be found beneficial, and should always be early employed.

Professional Remedies.—The application of a dozen and a half of leeches every day, for three days in succession, is the most efficacious remedy which can be employed. If these cannot be obtained, the patient must be bled freely by the arm until the pain and soreness abate. Where the skin is hot and dry, and the surface of the belly painful, sore, tense and swelled, there can be no harm in trying a solution of the sugar of lead as a topical bath, or the application of cold water. Blisters should not be used until the violence of the fever has abated. Calomel or the iodide of mercury, in small

doses, given long enough to produce a metallic taste in the mouth, but not to salivate, should be tried, if the inflammation does not yield to other remedies. The antimonial powder, the sweet spirits of nitre, and more especially the acetate of ammonia, will be found necessary to subdue the fever and to aid the reduction of the inflamed parts. After bleeding freely and evacuating the bowels, if there be much pain, opium, or the Dover's powder, combined with small doses of calomel, and alternated with a nauseating dose of ipecac, every four hours, will afford great relief, and assist in subduing the inflammation. This disease is produced by the same causes which produce other inflammations.

INFLAMMATION OF THE PLEURA — Pleurisy. — See *Pleurisy*.

INFLAMMATION OF THE SPLEEN — Splenitis. — The spleen is situated on the left side of the abdomen, opposite to the liver. An inflammation of this organ is known by a pain just under the short ribs of the left side, swelling, soreness to the touch, and more or less fever. The pain in the side will often shoot up to the diaphragm and to the left shoulder, and be accompanied with a short, dry cough, a sense of tightness about the heart, sickness or vomiting, and a discharge from the bowels of black blood. This disease, like an inflammation of the liver, is chiefly prevalent in hot climates, and requires, in general, the same treatment, where the symptoms are equally violent. The spleen appears to be subject to a chronic oftener than to an acute inflammation, in which case the disease must be combated with leeches, the blue pill, warm bath, a course of the mineral spring water, and mercurial plasters. A mixture of muriatic and nitric acid, used as a sour drink, is a capital medicine in a chronic inflammation of the spleen. A tea made of the barberry bark, and drunk several times a day, is a medicine of considerable efficacy. The spleen sometimes becomes enlarged to an enormous size, in which case it has been cut out, and the person has lived. It would not seem, therefore, to be an organ essential to life, although the disease of it may destroy life, or greatly derange the health. Like the organs of generation, it gives strength and greater life to the system, although not indispensable to existence.

Where clear indications of an acute inflammation in this organ exist, the lancet should be used freely; the sal nitre should be given, and a constant perspiration should be kept up by the use of the antimonial powder, or small doses of ipecac. or of lobelia. The bowels should be drained by salts, thoroughwort or butternut physic, and the part steamed with moist, hot cloths.

INFLAMMATION OF THE STOMACH — Gastritis. — An inflammation of the stomach is a rare disease. It commonly happens from irritating and corrosive substances which are taken into the stomach. Arsenic, corrosive sublimate, aquafortis, and the other mineral acids and alkalies, are the usual causes of it. It sometimes arises from the use of spirituous liquors, from blows, and a sudden suppression of the perspiration.

This disease commences with great pain in the region of the stomach; an unquenchable thirst; intolerable restlessness and anxiety; constant vomiting; great prostration of strength; a quick, hard, and small pulse; and continual watching. Often delirium and purging attend the disease. The countenance is sunken and the extremities cold. Where the disease is about to terminate fatally, there is a constant fainting and panting for breath, a cold, clammy sweat, and hiccough. The inflammation terminates either in resolution, ulceration, suppuration, or gangrene. If it terminates in gangrene it is fatal, and if in ulceration or suppuration, it may be protracted for a length of time, but eventually ends in hectic fever and death. In case of suppuration and the formation of an abscess, the event is known by cold shiverings and an increase of fever at night, and the accession of night sweats.

The favorable symptoms are a soft, full pulse, a warm perspiration, sleep, looseness of the bowels, and a greater state of composure. We once saw a fatal case of inflammation of the stomach which was produced by eating quahogs and cucumbers. It sometimes happens from the eating of lobsters and other indigestible or poisonous fish.

Domestic Remedies. — Where any acid, burning substance has been swallowed and produced the inflammation, sweet oil, melted lard, or milk and water, must be given, to neutralize the effect. If the substance is an alkali, such as pearlash, potash, or ammonia, lamp oil may be used, if sweet oil is not at hand. If the substance should be corrosive sublimate or arsenic, pearlash dissolved in water may be drunk. Emetics should be given, and a great plenty of warm water, or flax-seed tea, or sugar and water. If the substance taken into the stomach should be aquafortis or any of the mineral acids, the water of ammonia, largely diluted, should be administered. The crude soda, or a lye made of wood-ashes, mixed with a large quantity of water, will neutralize these acids and render them innocent, if taken immediately. In general, we must make use of the same remedies which are recommended in cases of poisoning.

Professional Remedies. — After the offending substance has been removed, the inflammation must be allayed by infusing landanum into flax-seed tea, and giving it by way of the rectum. As soon as the vomiting is allayed, gum-arabic water and chicken broth may be given. Opiates should always be given, if they can be made to stay upon the stomach. The cooling treatment must be strictly followed. Soda-water, the Rochelle powders, and the acetate of ammonia in a state of effervescence, will always be proper, when they can be made to stay upon the stomach. Cold water, bread-water, rice-water, and arrow-root gruel, should compose the drinks. An inflammation of this organ will sometimes end in a scirrhus of the pylorus, and where this is the case the disease can only be palliated. Opium, cicuta, and hyoseyamus, will be productive of most relief.

INFLAMMATION OF THE TESTES. — This inflammation

begins with swelling, pain, and soreness of the glands, and very often sickness at the stomach. The seminal organs become very sore, and extremely tender to the touch. The inflammation will sometimes run so high as to produce a general fever. The parts become red and extremely hard, and there is pain in the lower part of the bowels.

The most common cause of the inflammation is the irritation of the venereal virus. It is sometimes produced by external wounds, and occasionally by atmospheric changes. A reduction of the inflammation may always be attempted by sweating freely, and the application of lead-water to the inflamed parts. If this plan does not succeed in the course of twenty-four hours, a dozen Spanish leeches should be applied, followed with a warm, soft rye-meal or white-bread poultice, or, perhaps, what is better, the persevering application of woollen cloths wrung out of hot water and removed every twenty minutes. If the first application of leeches does not resolve the inflammation, they must be used a second or a third time. Where leeches cannot be obtained, blood must be drawn from the arm. The bowels should, at the same time, be drained by salts, calomel, magnesia, or some other gentle purgatives, and the inflamed organs supported by a suspensory bandage. The diet should be entirely vegetable, and spare, and the drink nothing but water. If poultices do not succeed in dispelling the inflammation, nauseating or even emetic doses of the tartrate of antimony will be found an efficient remedy. From a quarter of a grain to a grain, dissolved in a large quantity of warm water, should be given every three hours.

INFLAMMATION OF THE THROAT—Sore Throat.—See *Sore Throat*.

INFLAMMATION OF THE WOMB—Hysteritis.—This disease is the consequence of childbirth. We know not that it ever happens to unmarried women, unless the womb happens to be injured by wounds or bruises. Cancer of the uterus is a species of inflammation, but it is easily distinguishable from the disease we are about to describe, by the slow, gradual manner in which it commences, and the absence of the ordinary arterial excitement of inflammation in general.

An inflammation of the womb begins with pain in the lower part of the abdomen, heat and chills, headache, restlessness, a frequent desire to make water, accompanied with pain, sometimes a retention of the urine, and often delirium. The pain in the womb may be distinguished from the after-pains by its being constant, while the after-pains are intermitting. In this disease, the uterus is tumid, and sore to the touch.

The pulse is full, hard, and forcible, but not commonly very frequent. The mouth is clammy, and the tongue has a white coat; there is thirst, and a confined state of the bowels. The sanguineous secretion consequent on delivery is lessened or entirely suppressed, and the milk, though not often suppressed, is diminished in quantity. As the inflammation advances, the pain becomes

more severe, and extends to the back and down the thighs. The pain is sometimes dull and heavy, and at other times acute and darting.

The renewal of the puerperal secretion, or the lochia, is always a good sign, as it imports an abatement of the inflammation. If there is also an increase of water, a diminution of the swelling, an appearance of the perspiration, and a disposition to sleep, we may expect a favorable termination of the disease. An inflammation of this organ may end either in suppuration or gangrene, or, what is more common, may extend to the peritoneum, and produce fatal inflammation of that membrane. In either event it is fatal.

The disease is caused by too hard a labor; by some violence done the uterus in delivery by the use of instruments, or in extracting the after-birth; by taking cold, and improper nursing.

The treatment of this disease is much more perplexing than that of ordinary inflammations. It takes place after the loss of a good deal of blood and a still greater loss of strength. It appears about the usual time of the milk fever, and the pain and soreness of the part are not always, at first, distinguishable from the after-pains. The loss of strength may also be confounded with, or mistaken for, the exhaustion of delivery. The organ probably loses, in the process of child-birth, much of its sensibility, which renders the pain and inflammation somewhat obscure.

Remedies.—The bowels in this disease should be constantly drained. For this purpose, Epsom salts, calcined magnesia, castor-oil, cream of tartar, calomel and jalap, or the Rochelle powders, will answer; and where either of these is not obtainable, either the butternut physic or thoroughwort may be used. The cream of tartar, taken in the dose of a great spoonful every two hours until it operates, is a very fit medicine. It operates not only upon the bowels, but upon the kidneys, by increasing the flow of the urine. The calcined magnesia has the same or a greater tendency. Dr. Dewees, of Philadelphia, directs three drachms of calcined magnesia and three of Epsom salts to be mixed together, and taken in sweetened water or lemonade, in three doses, at the interval of an hour between them, and continued until an operation is produced. The operation of the bowels he advises to be kept up by the use of small doses of calomel, Rochelle powders, or Epsom salts, to the extent of eight or ten times in the first twenty-four hours. Afterwards, he drains the bowels once every day by a potion of the same kind. We cordially recommend the same course.

The antimonial powder, in doses of eight grains, should be given, every three hours, to raise a moisture upon the skin, assisted by the use of the acetate of ammonia in a state of effervescence. The kidneys should be operated upon by the use of the sal nitre, in doses of six grains every three hours. Balm tea, mullein tea, and warm lemonade, should be given for drink, and barley gruel for nourishment. Steaming with cloths wetted with hot water is considered a doubtful application; dry heat is more suitable. A

warm white-bread, rye-meal, or flax-seed poultice, kept constantly applied over the inflamed organ, is probably the most proper application which can be made. Vomits are improper, and opiates are unfit until the violence of the disease is abated. In vehement, deep-seated inflammations, opium may do mischief.

Bleeding in this disease is indispensable, although the patient may have recently lost much blood in consequence of delivery. Perhaps there is no inflammation which demands it more than this. It will often be necessary to repeat the operation two or three times. Two or three dozen Spanish leeches, with one bleeding, will, in many instances, be preferable to bleeding by the arm the second time.

A free perspiration should be supported, the kidneys must be kept free, the bowels must be often drained, and a plenty of diluent drinks given. After the force of the disease has been broken by bleeding and other evacuations, the Dover's powder or the morphine may be given to ease the pain, which is often quite insupportable.

INFLAMMATORY FEVER — Synocha. — This fever seems to be only a high degree of the simple continued fever, or, in other words, it is more inflammatory. The pulse in this fever is always hard, full, and strong; the heat of the body is much increased; the urine is red; the skin dry and parched; the eyes inflamed; the face flushed; the tongue furred with white in the centre, and is of a scarlet color at the sides; the bowels costive; and the stomach oppressed with sickness. The pulse ranges from ninety to a hundred and thirty beats in a minute.

The fever comes on with chills, lassitude, and pains in the head, back, and in all parts of the body, with more or less affection of the stomach. In the progress of the fever, the thirst becomes extreme, the breathing difficult, and the patient uncommonly restless. There is the greatest commotion in body and mind, and a high degree of gastric affection. If blood is drawn, it exhibits a sily crust of uncommon thickness. Delirium is common in the advanced stage of the disease.

The inflammatory fever is produced by atmospheric changes from heat to cold, from wet to dry, and from certain unknown states of the air itself. It is most common in the spring, and attacks people in the vigor of life oftener than the old or the young. The hale and full-blooded are particularly the subjects of it.

Domestic Remedies. — The patient should not be placed in a hot room; the temperature of the place should never be above sixty, and a lower degree of heat is preferable. The head, face, and surface of the body, should be bathed with cold water by means of a sponge or wet cloths; and if there is any sickness at the stomach, a gentle emetic should be given. Rochelle powders or salts should be taken in sufficient quantity to move the bowels, and the kidneys should be freed by the use of sweet spirits of nitre and cold acid drinks. Sweating, in this disease, is not to be forced. To procure

sleep and rest, Hoffman's anodyne liquor, in tea-spoonful doses, is preferable to opiates. But when an opiate becomes indispensable, it will be advisable to give eight grains of the Dover's powder, or twenty-five drops of morphine. The drink should be cold water, lemonade, soda-water, and barberry-water; and the nourishment, Indian gruel, barley-water, and bread and rice water.

Professional Remedies.—Blood-letting is the main remedy in inflammatory fever. Early in the attack of the disease, twelve or fourteen ounces should be drawn from the arm at once. If the pulse continues full, strong, and hard, and the appearance of the blood sily, the operation should be repeated in the course of the next twenty-four hours. If the brain is more affected than the other parts, leeches should be applied to the temples. Cold water or ether should be constantly applied to the head, and mustard poultices to the feet; these last, however, should never be used in the height of the fever. A free use of blisters must also be made to the head.

If the breathing be oppressed and delirium arises; if the pulse sinks and the feet become cold, wine, ether, hartshorn, and camphor, must be given to support the powers of life. If there is much stupor, intolerance of light, and excessive action of the heart and arteries, the event will be doubtful. Picking at the bed-clothes, starting of the tendons, and involuntary discharges by stool and urine, are fatal symptoms.

In ordinary cases of the fever, the treatment should be the same as in continued fever, with the exception of a more free use of the lancet, blisters, and other antiphlogistic means. Antimony, ipecac., acetate of ammonia, sal nitre, and saline purgatives, with the employment of injections as the occasion may require, will be found severally useful and necessary.

INFLUENZA—Catarrh.—The influenza is a hoarse cold. When the disease is fully developed, it is known by symptoms of fever, and an increased quantity of phlegm in the nose, throat, and windpipe. The first approach of it is perceptible in the mucous membrane of the nose, by a tingling feeling, and a degree of dryness and fulness of the passage. Soon succeed more or less pain in the forehead and difficulty of breathing through the nose. The dryness of the air passage to the lungs is followed by a discharge of a thin, serous fluid. Water runs both from the nose and eyes, and there is pain felt in all the bones. This condition does not last long before there is hoarseness in the throat, and a sense of rawness and soreness in the windpipe. A cough arises, with more or less difficulty of breathing. The strength and appetite are weakened or lost, and there are thirst, restlessness, and other symptoms of fever.

A remarkable chilliness or sensitiveness to cold is one of the most prominent symptoms of influenza. The cold air never fails to strike a chill through the whole system, and if the patient is much exposed to it a relapse is often induced. Too much caution, therefore, cannot be taken to prevent all such exposures.

The cough, which is at first dry, soon becomes loose, and brings up a load of phlegm; and with the looseness of the phlegm and sooth there follows an abatement of the violence of the disease. In common cases, and in good constitutions, the influenza is of short duration. In three or four days, the hoarseness and soreness of the throat cease, the fever abates, and the cough subsides.

An inflammation of the tonsils, or almonds of the ear, often arises along with the influenza, and renders the complaint more severe and longer in duration. This is evinced by pain in these parts and difficulty of swallowing, as well as by a higher degree of fever.

The exciting cause of influenza is generally deemed to be exposure to cold; but the disease is an inflammation of the mucous membrane of the nose, throat, and windpipe, and may doubtless be produced by any of the causes which produce inflammation in general. To confine its production to the application of cold alone, is neither warranted by fact nor analogy. Heat is probably oftener the cause of inflammatory diseases than cold. Heat is a direct stimulant; cold is a sedative. Heat excites the action of the sanguiferous system; cold allays it. The action of cold, or excessive abstraction of heat from the body, probably precedes the stimulus of heat in the production of inflammations. The sudden transition from one extreme to the other constitutes the cause of diseased action.

Influenzas are most prevalent in the fall and spring, when the earth and the atmosphere are charged with a great quantity of moisture, and when freezing and thawing are daily occurrences.

In general, it is a mild complaint, mostly free from danger, but in people disposed to lung affections, such as asthma, coughs, hemoptysis, it often lays the foundation for consumption. It readily induces tubercles and bleeding from the lights. It is a fire which enkindles the train which perhaps had long been laid, but which would have remained unharmed but for this accident.

The variety of changes which the atmosphere undergoes in its constituent principles and its weight has never been made a subject of very close inquiry. It is probable that an inflammation may be excited in the human body by a change in the weight of the air, as well as by a change in its temperature. No inconsiderable violence is done to the solids and fluids of the system every time the barometer rises or falls. The electrical changes of the air are probably no less effective in disturbing the actions of the animal economy. Its changes from moist to dry, without any variation in temperature, may be a source of many maladies.

The influenza is often an epidemic disease, pervading the whole country, and sometimes the whole globe, nearly at the same time. At such periods it often rages with great severity, and assumes a malign character. Within the last twenty-five years it has prevailed three times in this country, and carried off many of the aged and not a few of the young.

The epidemic influenza has been known to prevail in all seasons

of the year, so that its cause cannot be the effect of changes from warm to cold. Many have supposed it to be occasioned by some peculiar constitution of the air, independent of its sensible changes. But, whatever the nature of its cause may be, it operates suddenly, and diffuses itself widely in a short space of time.

Remedies.—In most cases of influenza, it is necessary only to remain in the house for a few days, to adopt a vegetable diet, and to take warm demulcent drinks, such as flax-seed, mullein, and slippery-elm bark tea, in order to excite a gentle sweat.

In severe cases, an emetic of ipecac., antimony, or lobelia, should be given. It will often be necessary to repeat the emetic several times. A simple emetic is productive of great relief, but will not always be found adequate to a complete cure. As with blood-letting, so with emetics; the disease can only be subdued by a proper adjustment of the means to the end. Vomiting has great power over the mucous membrane of the lungs and wind-pipe; it seldom fails to loosen the phlegm and moderate the cough.

Blood-letting must sometimes be resorted to, as well as medicines which moderate the circulation of the blood. Blisters to the chest are often required, and generally productive of much benefit.

After the violence of the disease is over, and the phlegm loosened, a Dover's powder may be given, or twenty-five drops of morphine or laudanum. The hive syrup, in tea-spoonful doses, is a good medicine in this complaint. The lac ammoniac is often beneficial. Equal parts of castor-oil and the syrup of squills, in the dose of a tea-spoonful, every three or four hours, will be found of great benefit. In general, the bowels should be kept open, the kidneys free, and the body warm. It should always be borne in mind that the influenza is an inflammatory disease, and requires depletion instead of stimulants, unless where it assumes a malignant form; in that case, stimulants will be demanded.

INFUSION.—An infusion of any medicine is made by pouring cold or hot water, or any other liquor, upon it, to extract its virtues. It differs from a decoction in that the water is not raised to the boiling point. The material is only soaked or steeped.

INORDINATE APPETITE.—Nothing is more remarkable in the animal economy than the difference between different people, of the same age, size, and habits, in the quantity of food which they eat. This difference is owing to many causes. The secretion of the gastric juice appears to be the cause of the appetite in general. If this secretion is checked or suppressed, as in a fever, the appetite is lessened or destroyed. And the longer a person goes after the digestion of one meal before he eats another, the more inordinate will the appetite become, from the accumulation of the gastric juice in the stomach. The greatest eaters are not always large, fleshy, or fat. Often, people will have an inordinate appetite who are thin and emaciated. It is not uncommon to meet with individuals, in apparent good health, who will eat three or four times the quantity of food which is demanded by people in

general. Where the food makes flesh in proportion to the quantity eaten, or where it is demanded by excessive exercise or hard labor, or to replenish the empty vessels after the long exhaustion of a fever, we cannot esteem the inordinate appetite a disease; but when it arises from a feeling of faintness and emptiness, or from a habitual indulgence in large and frequent meals, it becomes a disease and requires correction.

In some cases of inordinate appetite, the food will be thrown back from the stomach, and in other instances it will be digested. The case of Tarare, quoted by Dr. Good, as related to the French Institute by M. Percy, a surgeon-in-chief to the French army, is a striking illustration of an inordinate appetite attended with a corresponding force of digestion. "Tarare was a soldier, and, before his enlistment, was in the habit of devouring enormous quantities of the coarsest flesh, fruits, and roots; and subsequently, he was found, after swallowing his own rations, to feed on the refuse of his comrades' messes, or offensive meat thrown on the dunghill, and to devour cats, dogs, and serpents. He was strongly suspected of eating human flesh, and was often restrained with difficulty from the ward appropriated to the dead. He at length fled from the army before a rumor that he had devoured a child of sixteen months old, which had suddenly disappeared. The alvine evacuations of this man were not immoderate; but, after gorging his stomach, he slept and sweated in torrents of perspiration,—a symptom common to the disease. He fell at length into hectic, and died of emaciation."

Excessive perspiration always produces an inordinate desire for food, where there is no fever present in the system; and it is more or less so with all excessive evacuations, whether of blood, urine, or of the intestinal contents. A dose of physic, taken every day, in a state of health, promotes the appetite enormously.

Where an inordinate appetite is accompanied with emaciation of the body or excessive evacuations, the method of cure is to restrain the evacuations, and to treat the system with tonic medicines, such as quinine, chalybeate waters, mineral acids, and wine. Opium is found to allay the appetite very much. Small nauseating doses of ipecac., antimony, or of lobelia, by keeping up a slight sickness at the stomach, will moderate the appetite. In cases of emaciation, the warm bath, moderate exercise, and a sea air, will have a tendency to correct the disorder. Idiots and people who have lost their mental faculties are apt to be great eaters,—a fact which shows the influence which the action of the mind exerts upon the stomach. Man reduced to a brute acquires the digestive powers of a brute.

INORDINATE LUST. — It is not more singular that the sexual appetite should become morbid than that any other function of the body should become deranged. The sexual organs are capable of irritation, and when, from some cause or other, this happens to be the case, it is scarcely less to be deplored than the most distressing diseases of other parts.

Young men often confess and lament their own weakness in this respect, at the same time that they declare their utter inability to remedy the evil. Whether the disorder is owing to some fault in the original temperament of the nerves, to vicious habits, or to certain false ideas which have crept into their minds, it is not easy to determine. Certain it is that both sexes are liable to a disorder of this nature. Such was the severity of this disorder in a young man belonging to one of the States, that he actually besought his physician to take from him the physical power of sexual gratification; and, after a mature consideration of the whole case, the request was actually complied with, and the organs were removed. The case had become deplorable. The young man was reduced to a skeleton; his mental faculties had become impaired, his resolution gone, and his life had become a burden, — so much was he tormented day and night with inflamed desires. The surgeon has been blamed, but the operation was attended with entire relief, and the sufferer has never regretted it.

An irritation of the sexual organs, or inordinate lust, is indicated by sadness of the countenance, a pale complexion, lascivious looks and gestures, and a want of spirit in the motions of the body. In some instances there is a visible local irritation, and in others inflammation. The tincture of cantharides, it is said, will produce an irritation of the sexual organs. Lying-in women are sometimes affected with a purely local inflammation of this nature; but in these instances, we believe, it is always accompanied with some alienation of the mind.

The cure for this disorder is a vegetable aliment, cold water, a cold bath, and constant exercise or labor. Laborious people are seldom troubled with inordinate lust. In them, the fluids of the body are equally distributed; their senses, at night, are fast locked in sleep; their thoughts, during the day, are occupied with the material world; and no space is left for the imagination, by its bewitching imagery, to inflame the desires.

A life at sea for a few years has sometimes proved a cure for this disorder. But all medical authors agree that the most effectual remedy is a suitable marriage. Where it is the consequence of a debauched life, it is pretty sure to entail upon the individual a miserable old age, lowness of spirits, melancholy, and often an entire loss of the mental powers.

The cicuta, taken in the form of a pill three or four times a day, gives an obtuseness to the irritation, and composes the nerves. Camphor, in doses of five or six grains, will have a similar effect. But opium comes the nearest to an antidote of any article at present in use. Two grains of opium taken three times a day, and continued for several weeks in succession, will often reduce the affection within due bounds. The application of lead-water, or a solution of the sulphate of zinc, to the parts, will assist in the cure. Instead of romances, novels, and poetry, a severe kind of reading should be pursued, such as history, law, newspapers, and

political essays. The study of mathematics and natural philosophy will have a still better effect.

INORDINATE THIRST.—People differ scarcely less in the amount of food which they eat than in the quantity of water which they drink. Some people never drink excepting at their meals, while others will swallow several quarts in the course of twenty-four hours. We had a relative, in the enjoyment of the most perfect health, who never drank anything in the whole day but two or three cups of tea. It is a fact, we believe, that people who are not troubled with thirst seldom perspire much, or have the temperature of their bodies much raised. The power of salt in producing thirst is a singular phenomenon. It is probable that inordinate thirst, where it is not a symptom of fever, or of some excessive secretion and evacuation, depends upon a state of the stomach very much like that produced by salt,—a slight irritation, never amounting to pain, soreness, redness, and swelling, but enough to demand the presence of cool liquids. An increase of heat in the system is almost invariably followed by an increase of thirst.

The habit of drinking large quantities of water or other liquids we believe to be very pernicious; it dilutes the gastric juice and lessens its solvent power, and eventually destroys the appetite; it generates wind, and weakens the coats of the stomach and bowels; it thins the blood, and destroys the cohesive power of the muscular fibres. In cases of inflammation, the drinking of large quantities of diluent liquids is precisely the course we take to lessen the stimulant properties of the blood and to restore it to a healthy state. In a state of health, the blood is impoverished by large quantities of drink, in the same way that it is in cases of inflammation and fever. We believe, however, that where people over-eat, cold water is in a measure a corrector of its pernicious effects.

We once saw a case of inordinate thirst where the individual drank to the amount of a quart of water every hour, or twenty-four quarts in the course of the day and night. It continued for about a year, and gradually subsided. There was in this case no excessive evacuation excepting by the kidneys; but the kidneys did not appear to be diseased, nor was there any other disease apparent in the system.

In cases of immoderate thirst, the best medicines are soda-powders, lemonade, cream of tartar, sweet spirits of nitre, the sal nitre, liquorice, gruel, balm tea, and acetate of ammonia, or lemon-juice, and the salts of hartshorn. The cold bath should be often used, and the food should be eaten in as fresh a state as the palate will bear. The chewing of liquorice-stick has a wonderful effect in abating the thirst. Rain or spring water, where it can be obtained, is much preferable to well water, which always contains more or less of earthy, fossil, or mineral matter. A person afflicted with inordinate thirst should avoid exposure to great heat of the

sun, lest, by instinctively drinking too much cold water at a time, he should fall a victim to it.

INSANITY.—This disease is a derangement of the nervous system; but whether it is an inflammation, a paralysis, or a simple state of debility, we have as yet found no means of determining. An alienation of the mind may arise from either of these three states of the brain and nerves.

Mental derangement, or insanity, has been divided into several different kinds; but as all these divisions have been founded upon the mental manifestations, and not upon the state of the pulse, the secretions, and variations in the operations of the functions of the body generally, such as form the distinctive characters of other species of disease, they do not seem to us of much moment; much less are they calculated to throw light upon the nature of the disease, or to be a useful guide in its treatment. Some of these distinctions appear to us to have no foundation in fact. There is, for instance, a certain state of the mental manifestations called *monomania*. Now, we believe that the nervous system of those who are called monomaniacs is often as deeply and as generally diseased as the nervous system of those who are deranged upon every subject, although it is said that the monomaniac is sane upon every subject but one. Some people will appear in conversation, and, perhaps, in their general conduct, to be sane upon every subject but one. Others will appear to be sane upon all subjects but two; and others, again, upon all subjects but three or four, and so on; but the man or woman who is deranged on three or four subjects is seldom more diseased than the person who is deranged only upon one. If the manifestations of the nervous system in general are examined by one well skilled in this disease, he will very soon perceive that the monomaniac is as unsound as he who is deranged upon subjects in general. A man is often said to be insane only in his religious or political notions, or respecting his wife, children, or some philosophical subject; but this subject, as it is called, often includes a large class of subjects, or of ideas and feelings, and embraces as much in reality as if the person manifested a more extensive range of alienation.

Dr. Cullen has divided insanity into two kinds,—melancholy and mania; and most medical writers have adopted this division; but it is well known that both these states of the mind often exist in the same individual, at different times, and can, therefore, only denote certain mental symptoms. Nothing is more common than to see the melancholy man become maniacal or furious, and the maniacal man become melancholy, silent, woe-begone, shy, timid, and solitary. Insanity often vibrates between a state of melancholy and mania or furious madness. Melancholy and mania only seem to denote the two extremes of insanity; or, rather, it is expressive of the spirits of two individuals who are affected with the same disease; because, if you give a certain quantity of stimulus to the melancholic patient, he will immediately be thrown into

a rage, or a state of mania. If we examine clearly into the real state of the nervous system, the seat of the derangement, we shall find it in the same state in both cases.

A paroxysm of insanity is like a fit of intoxication, or more nearly like the state produced by the exhilarating gas. Indeed, the exhilarating gas produces for a time a complete state of mental derangement. Some it makes melancholy, and others lively and furious. If people could live in such an atmosphere, the whole world would become maniacs. In intoxication, the thoughts and feelings are all exalted or depressed in the same way as in mental derangement, but there is not commonly the same false ideas and apprehension of things, although in some people it produces hallucination, or false impressions.

Some have contended that insanity was not a disease of the body, but entirely a disorder of the mind. This idea, we think, must inevitably lead to a wrong treatment of the disease. We may as well say that the delirium of a fever is not a disease of the body. In a fever, when the nervous system and the body in general are restored to soundness, the mind is restored also to soundness. In most cases of insanity, a certain degree of fever forms a part of the disease. A quick pulse, uneasiness, wakefulness, costiveness, a dry skin, and a diminished secretion by the kidneys, are very common symptoms attending the early stage of insanity. Insanity is neither more nor less than an unsoundness of the brain, and the nerves which proceed from it. We believe it to be a disease, in every instance, of the nervous system.

The loss of sleep, if continued for several nights in succession, produces a state of mind very closely bordering upon insanity. Indeed, the loss of sleep often produces the disease; and as soon as sound, refreshing sleep is restored, the insanity will begin to abate, and in a short time will disappear. This again shows that insanity is a disease of the function of the brain, since wakefulness, long continued, ends in the disease, and since sleep is a function of the brain. Sound sleep puts an end to the delirium of a fever, which is insanity as long as it continues.

Insanity in its commencement is merely an excitement of the mind. The person becomes uncommonly engaged in religion, politics, business; in literary, scientific, and professional pursuits, or mechanical employments; he every day becomes more ardent in these pursuits, until he cannot sleep; and, finally, he begins to show clear marks of extravagance in his language, plans, ideas, passions, and conduct. Sometimes the fit of insanity comes on with a kind of fainting-fit, in which the limbs become stiff, the eyes fixed, and the countenance considerably distorted. Sometimes the person becomes silent and mute, and at other times commits some act of violence upon those around him, or upon himself. Often, the person will dart out of the house and run away, as if to save his life or to escape danger. Under some deep, overwhelming commotion in the mind, he will plunge into the sea

or leap from some fatal precipice. After this paroxysm is over, if he escape with his life, perhaps he will become quite calm, and appear to have some sense of his own condition. But this state will not continue long before he becomes excessively lively, talks fast and loud, sings, laughs merrily, moves with rapidity, and appears surprised at nothing.

Insanity in another class of people comes on more gradually. The person will be observed to be under some deep concern of mind, either about religion, his country, his property, his health, or his family, which will keep increasing until both sleep and appetite are destroyed. He feels as if he was either going to be reduced to poverty, to infamy, or to suffer, in some shape or other, some unaccountable evil. He will be seized with a fit of the horrors, and the derangement of his mind will become manifest. This class of people will commonly manifest their disorder by great fearfulness, suspicion, love of solitude, fickleness of temper, watchfulness, shyness, torpidity of the senses, and an indisposition either to ask or to answer questions. They are averse to motion, and commonly have a fixed scowl of suspicion upon the countenance, which is undoubtedly expressive of the state of their feelings. They will often lie in bed all day, or stand fixed in a certain spot in the room. Fear and suspicion, resentment and despair, are the prevailing states of the feelings of this class of people. They are said by writers to be melancholic, in opposition to another class who are maniacal, or affected with furious madness. We prefer to describe the disease as it appears in different individuals.

Deranged people appear to have no absolutely new thoughts, feelings, or states of the mind, but merely an aggravation of all of them. They manifest the same thoughts, passions, emotions, instincts, and sentiments, which they ever did, but present a different combination, degree, or state of them. There appears to be either an aggravation or a diminution of the mental operations. The sphere of thought and feeling is either very much widened or very much circumscribed.

Along with the deranged state of the brain or mind, there is almost always a deranged state of the stomach, bowels, pulse, and temperature of the body. Indigestion, flatulence, costiveness, coldness of the extremities, or an unnatural degree of heat in the head, a rapid or slow circulation of the blood, a full or empty state of the blood-vessels, a diminished or increased appetite, and a great sensitiveness, or a torpid state of the skin, are common symptoms of the disease.

In violent, furious cases of insanity, there is a fulness of the blood-vessels of the head, and often intense pain, a high fever, redness of the face, glistening of the eyes, violent exertions of the strength, loud screaming, and an unaccountable hurry of the spirits. There is a swiftness of thought, feeling, and utterance, which denotes an intense commotion of the brain within. People sometimes die of insanity within a week or fortnight after the

attack; but more commonly the disorder continues for three, six, nine or twelve months, and they recover, or lapse into a confirmed state of derangement.

Some deranged people have a propensity to destroy, tear, and strip to pieces everything which comes in their way; while others are uncommonly harmless, gentle, and childlike, in all their conduct and manners. The finest specimens of amiability might be copied from them. Some are entirely negligent of dress, while others are constantly decorating themselves with feathers, plumes, flowers, girdles, sashes, ribbons, rags, shavings, and red list. The brightest and gayest colors are always selected, from which they construct the oddest and most fantastical combinations. The greater part of insane people profess to be discoverers, either in the arts or sciences. Some work in figures, others in literature, improving the language, or its pronunciation. Some labor in the field of science, and discover new laws and properties of matter, and others in mechanics, inventing new wheel-work or the perpetual motion. The insane man discovers as great facility in believing the most incredible things as he does in executing the most difficult plans. He runs into the idea that he is a king, emperor, lord, duke, or general, and that those around him are his subjects or his soldiers, as one does in a dream, and acts accordingly. To himself, he is perfectly well, and if anybody calls him sick, or offers him medicine, he thinks it is a trick, or that there is a design to poison him, or to insult him. Some will refuse to eat or drink, from an idea that they can live without it, or that it is wrong or hazardous for them to do so.

A propensity to wander is very common. Some will have a propensity to steal, who are perfectly moral when well, either from an idea that everything is theirs, or that some necessity of state justifies them in the theft. Hurry, impatience, insensibility, and wit, are common characteristics of the disease.

A deranged person cannot bear to have a well person look him steadily in the eye for any length of time. It either conveys some suspicion, or discovers to him some weakness which is painful, and the countenance falls, or the eyes turn away. It is extremely painful for deranged people to confine their attention to any new subject, or a subject which does not interest them, — which shows that the brain and nerves are in an inflamed or sore state. That the brain and nerves of a deranged person are more or less sore, in the common acceptation of the word, we have no doubt. Painful thoughts and feelings, such as mark a state of derangement, can only arise from such a state of the nervous system. The paroxysms to which crazy people are subject most probably arise from an increase of the soreness of the nervous system. The comparatively lucid intervals which they often enjoy is no doubt owing to a partial subsidence of the inflammation of the brain. Phrenitis and the delirium of fever are evidences of this position. The mental manifestations are nearly

the same as in insanity, and we know that those manifestations are the result of inflammation or irritation.

Some people are troubled with sore or inflamed eyes for the greater part or the whole of their lives. The eyelids will always look more or less red, feel a little sore, and secrete more than an ordinary quantity of mucus. The function of the eyelids is deranged. Yet, after death, the eyelids will be as bloodless as other parts of the body. There is often an inflammation of the skin, called St. Anthony's fire, or erysipelas, and the function of the skin will be deranged; but yet, after death, the skin of such a person will look blanched and bloodless. No traces of inflammation are discoverable. A bloodshot eye is not apt to remain so after death. So with the brain and nerves, they may be inflamed or sore, to a greater or less extent, through the whole course of a person's life, and yet no trace of the inflammation be visible after death. The arteries which circulate the red blood, the cause, for the most part, of the red color of an inflammation, are, after death, empty, and the parts which were before slightly red and inflamed become pale, like the other parts of the body.

We have said thus much to show that insanity is a disease of the body, and especially of the nervous system. Instead of mental derangement, it would be far more proper to call the disease nervous derangement. It is essentially a disease of the nervous system, as much as dyspepsia is a disease of the stomach, ophthalmia, a disease of the eye, or rheumatism, of the joints and muscles.

The causes of insanity are chiefly those which affect the thoughts, passions, emotions, instincts, propensities, prejudices, and superstitions. Any painful subject of thought or feeling, long revolved in the mind, will produce insanity. Injured feeling which cannot be resented, mortified pride, perplexity in business, in scientific studies, in the arts, and in navigation, will cause a derangement of the nervous system. Disappointed affection, disappointed ambition, and disappointed hopes or anticipations of any kind, will cause insanity. Political, religious or social excitement will produce the disease. In general, everything which worries and distresses the mind for a long time, and creates a deep concern, will produce the disorder. Great terror, grief, anxiety, fear, despair, and hope deferred, produce the disease. These causes seem to operate by first occasioning a loss of sleep, and of the appetite, which in their turn cause an emaciation of the body and an empty state of the blood-vessels. The changes which take place in childbirth often occasion insanity, either by directly affecting the nervous system, or operating upon the instincts and feelings of the mother.

The causes which produce insanity generally operate upon the mind. In the treatment of the disease, therefore, no sudden cure is to be expected. A disease which has been long in contracting, will, in general, be long in recovering.

Any affection of the passions, instincts, propensities, or preju-

dices, which makes the person often absent-minded, and constantly awakens the same set of feelings, is very apt to end in insanity. Pain and disease in other parts of the body will often disorder the mind.

A prolific cause of insanity is masturbation, which constantly exhausts the nervous system and drains the blood of its vital principles. Intemperance, a debauched life, and loss of sleep, are frequent causes of the disease. Starvation almost invariably produces it.

Insanity is a disease which people are never looking out for, as they are for other diseases, and of course no means are ever thought of or used for its prevention. And yet, perhaps, there is no disease where the causes in general are better known or easier avoided. It is a calamity which no one wishes to think of, much less to make any provision for. But it is one of the diseases of the human body, and as certain to occur as any other disease. Like other diseases, it is produced by the general wear and tear of the human body. In some people, the lungs are the first organ to give out, and in others the stomach. In some the heart will first fail in its function, and in others the liver. In some, again, the brain will fail in its office, and in others one or several of the senses. The phenomena of insanity differ somewhat from the phenomena of other diseases, but they are equally the result of a morbid condition of the organ from which they proceed. A dropsy of the brain disturbs or destroys all the operations of the mind, — memory, reason, judgment, imagination, association, and perception, — and in many cases sensation even, before life is extinct. In a word, the mind is deranged, in a way very similar to its derangement in insanity. In an inflammation of the brain produced by the changes of the atmosphere, the heat of the sun, or any other cause, the symptoms of the disease, so far as the affection of the mental operations is concerned, are almost precisely the same as in a case of violent madness or insanity; and where the inflammatory affection becomes chronic, the disease is precisely the same.

In the treatment of insanity, we believe too much stress is laid upon endeavoring to regulate the operations of the mind, or to bring the thoughts and feelings into the right channels. In our view, it answers but very little purpose to reason with, persuade, or threaten, a deranged person. It is very much like reasoning with, persuading, or threatening a pain in the stomach, a suppressed perspiration, or a sore throat. It is true that the mind and the disease can be very much irritated or soothed by harsh or kind treatment, but this is accomplished by affording pleasure or pain to the diseased organ. The disease is cured, like other diseases, by a rest of the mental operations, by sleep, by a replenishment of the blood-vessels, by an increase of the flesh and of the substance of the body in general, by an enlargement of the organs and a reëstablishment of the strength. When the nervous system acquires its original strength and soundness, the mental operations become right and sound.

Emaciation of the flesh, and of the substance of the organs, is a very common characteristic of insanity. In insanity, it is very probable, almost certain, that the substance of the brain is as much wasted as the substance of the muscles. It is essential, therefore, that all the fluids of the body should be replenished, in order to cure the disease.

When a person becomes insane, he should be confined to the house like other sick people, and for the first two or three weeks, at least, should not see company, or be disturbed with any kind of business. There is an acute stage to this, as to other diseases, which requires complete rest. If the patient is violent, wild, or disposed to injure himself or others, he must either be watched by two strong, fearless men, or women, (if the patient is a woman,) or must be confined with manacles or a strait-jacket. People should never be allowed to run at large, or to be by themselves, after they have been discovered to be deranged. The worst accidents have happened from this negligence on the part of friends and acquaintances. Most of the homicides that are committed are owing to the negligence of friends, and of the public, in protecting themselves against these accidents. As soon as preparations can be made, the person should be sent to an insane hospital, where alone he can receive that treatment which is suited to his disease; but whether to a private or a public hospital, must be left to the choice of the friends. The public hospitals, in New England, are probably better managed than the private ones. They have a greater number of attendants and more extensive accommodations. It is best to send the person to a hospital which has but a moderate number of patients. The most enlightened treatment which the world now affords for the insane is at a public hospital or asylum. There they are treated like sick people, and find those accommodations and appliances which are adapted to the disease. Suicides and homicides are prevented, and many a person, who would either have destroyed himself or somebody else, has been prevented from it by proper care, and restored to soundness and health.

The public is deeply concerned in providing suitable institutions for the insane. The public safety, as well as the commonwealth of the people, require safe retreats for those who are shattered and helpless.

The treatment at an insane hospital consists in the means which are used for the safety, comfort, recreation, and rest of the patient, and those which are used to save the life and to restore the health. Safe rooms, galleries, workshops, lodges, bathing-rooms, and yards or gardens for exercise or walking; safe, quiet, retired, well-aired, and clean bed-rooms, and comfortable beds; good dining-rooms, and plain, wholesome, and nutritious food, constitute the most essential provision of an insane hospital. The fare is regulated by the state of the patient. If the patient is feverish, or betrays any inflammatory affection of the brain or nerves, the diet consists of gruel, milk porridge, broth, or some liquid food. If the disease

is in a chronic state, the fare is very much such as will be found at any well-regulated boarding-house in New England. Chocolate, and tea and coffee of a moderate strength, are allowed twice, and meat once a day.

To make the patients comfortable and happy is one of the principal uses of an insane asylum; and did it secure no other object, it must still be considered as answering one of the most essential and best of purposes. An insane person is a sick and diseased person, and, although he may not be conscious of it himself, any more than a person in the delirium of a fever, or others may not discover the diseased part, he labors under a disease of which people often die, and from which they suffer the keenest anguish.

In the insane hospitals of New England ample provisions are made for exercise, as well in-doors as out. Long, well-aired galleries for walking, workshops, nine-pin alleys, and billiard tables, furnish the patients with amusements and exercise at the same time. Recreation is an essential instrument in the cure of affections of the nervous system. It gives rest to the weary mind and the sore and torn feelings. Sleep, recreation, exercise, and a plentiful supply of good, wholesome food, which is not stimulating but nourishing, lie at the foundation of all the means of curing insanity.

The amusements of our insane asylums are cards, backgammon, checkers, chess, billiards, nine-pins, dances, walking parties, riding parties, gardening, and an indulgence in all the arts of painting, music, drawing, and architecture, for which the several patients, both men and women, may have a taste. The great object, at the present day, is to allow the patients all the liberty and enjoyment which are compatible with their safety and welfare. Care and watchfulness on the part of the attendants are substituted for the bars, bolts, fetters, strait-jackets, and dungeons, which formerly secured the insane. It has been found that these wild members of the human race can, by sagacity, and kind, humane, but firm and consistent treatment, be disarmed of their fury, and the troubled waves of mental emotion hushed. Provocation is strictly prohibited, as it ever should be, and all mental excitement is guarded against. As much as can be, the patients are treated according to their attainments and stations in life. The patients, in general, are so thoroughly watched by a competent number of attendants, and guarded by suitable appliances to prevent personal injury, that suicides are extremely rare. Not more than one occurs in a well ordered asylum, where twenty would occur among the same number of people treated at home. No punishment is ever inflicted; but if the patient becomes excited and ungovernable, he is confined either in his own chamber, or in one of the lodges, which are so constructed as to shut out the light, and are somewhat remote from the unexcited patients. The patients are classed somewhat according to the degree in which they retain their senses and are found to be com-

panionable. This contributes very much to their pleasure and amusement, as well as to their improvement in health.

Exercise is the great instrument in controlling the circulation of the blood, and in distributing it in due quantity to every organ and part of the body; and nowhere is this powerful agent better understood or appreciated than in our insane asylums. More or less labor, or exercise by walking, or some gentle play, is prescribed every day. This induces sleep, composure, and, in most cases, combined with suitable aliment, eventually regulates all the functions of the body. Those who enter the hospital constipated or costive, commonly, in a few weeks, as we have been assured by Dr. Bell, of the Charlestown asylum, become regular in their bowels, and seldom need the assistance of cathartics. An abatement of the mental excitement appears to be concurrent with the healthy action of the bowels, and no doubt contributes in a great degree towards it. Mental excitement of any kind, even in a state of health, will produce costiveness, as everybody must have noticed who has only been excited enough to lose a single night's sleep. As soon as the excitement is over the bowels are restored to their usual activity.

The medical treatment in insane hospitals is generally pretty uniform and simple. It consists in warm and cold bathing; in suitable cathartics and tonics united with cicuta; in blood-letting very rarely, which is a great improvement in the treatment of the disease; in administering food, such as broth, gruel, and milk, by the use of the stomach-pump or forcing-syringe, — another invaluable improvement in the treatment of the insane, which has saved many a life, and will save thousands to come; and in the administration of remedies suitable to the increase or diminution of the cerebral excitement, sometimes cooling and anti-inflammatory, and sometimes stimulating. The sal nitre, sweet spirits of nitre, small doses of antimony or ipecac., salts, castor-oil, calcined magnesia, quinine, carbonate of iron, opium, cicuta, morphine, Dover's powder, blisters, leeches, and bland stimulating poultices, are the medicines in the most common use. Everything indigestible is carefully avoided. Strawberries, cherries, apples, peaches, grapes, plums and currants, are allowed in abundance. The drink is cold or sweetened water. The patient is forced to cleanliness by washing every morning, and bathing once a week. They retire early to bed, and rise early in the morning. Cheerfulness and lively conversation are encouraged, and the employment of the external senses induced, instead of reflection and revery. There can be no doubt that people come sooner to their senses, and oftener recover from the disease, in these institutions, than by any treatment which can be pursued at their own homes. Either the state or town, we think, is bound to give every insane person a fair trial of recovery at a public hospital, if too poor to incur the expense himself. It is an obligation which the town or state owes to every individual.

In private practice, the remedies and means of cure in insanity

should be as nearly copied from the public institutions as possible. Insane people behave much better abroad, among strangers, than they do at home. This is natural, and the fact should be improved for the benefit of the insane person. He is often removed from the original scene of his excitement, and the whole course of his thoughts, associations, and feelings, is changed. The objects which enkindled the flame, he is snatched away from, and the fire is, in a measure, bereft of its fuel. There are some cases, however, where the mind is so much destroyed as to be insensible to persons or places, and not affected by any change which can be made in place of residence.

INTERMITTENT FEVER. — Fever and Ague. — See *Fever and Ague*.

INTESTINES — Bowels. — See *Bowels*.

INTUS-SUSCEPTION. — The running of one portion of the bowels into another. It produces a stoppage of the bowels, and all the symptoms of colic. See *Colic*.

IODINE. — This material is obtained from seaweed, or rather from the ashes of seaweed. The ashes of the seaweed are leached, and to the lye is added oil of vitriol. The mixture is distilled in a retort, when the iodine passes over into a receiver and is condensed. It consists of crystallized scales, of a bluish-gray color. It has a metallic brightness, and a smell resembling that of chlorine. When iodine is volatilized by heat, the vapor into which it is converted has a brilliant violet color. Combined with oxygen, it forms the iodic acid, and with hydrogen gas, the hydriodic acid. The iodine has of late years been much used as a medicine in the cure of the king's evil or scrofula, and diseases of the glands. In the disease or excrescence called the goitre, it is said to have excelled all other means of cure. In scrofulous affections, it is probably one of the best medicines known. In its properties, it resembles the marine or muriatic acid. It is combustible, and emits a blue flame. The ordinary dose of iodine is from a sixteenth to a quarter of a grain, increased as the case requires. It may be given, in the form of tincture, in the dose of from ten to fifteen drops, or in solution in water, to which the essence of cinnamon and simple syrup have been added. To have its proper effect, it must always be given for a long time and in a small dose. It bids fair to become a valuable remedy for diseases in general. Water dissolves it in a very slight degree, but alcohol more readily.

IODIDE OF MERCURY. — This medicine is made by rubbing together in a mortar an ounce of mercury and ten drachms of iodine, adding alcohol gradually until the globules are no longer visible. A red powder is produced from the mixture, after being dried by a gentle fire. It is of a beautiful vermilion color, soluble in alcohol and ether. It resembles, in external appearance, the red precipitate. It must be kept in a closely stopped vessel, or its virtues will be dissipated. A dose of it for an adult is from an eighth to a quarter of a grain. It is efficacious in the cure of the venereal disease and affections of the skin. Dissolved in alcohol and ap-

plied as a wash to eruptions on the skin, its efficacy is said to surpass the effect of all other mercurial preparations. The iodide of mercury is especially applicable to the venereal disease in scrofulous constitutions. It is often used in the form of an ointment.

IODIDE OF POTASH. — This salt is formed by the union of potash with iodine. Its color is an opaque white; its taste acrid and bitter. It crystallizes in cubes, and dissolves in twice its weight of water. Its action upon the system is nearly the same as iodine, and is employed in the cure of the same affections. In the form of an ointment to the surface, it has been found effectual in dispelling glandular tumors and curing diseases of the skin.

The dose internally is from one to five grains, dissolved in water.

IPECAC. — *Ipecacuanha.* — *Ipecac.*, as usually met with in the shops, is a finely ground root, the product of South America. The botanical characters of the plant producing the genuine ipecac. were long unknown after the introduction of the root into Europe as a medicinal substance, and, though it has been used nearly two centuries, it is only within the last half century that it has been accurately described, by Dr. Gomez, of Lisbon, who had seen and obtained specimens of it in Brazil. It is a small, shrubby plant, with a root from four to six inches long, and about as thick as a goose-quill, marked with annular wrinkles, descending obliquely into the ground, and sending off here and there slender fibrils. The stem is two or three feet long, but, being partly under ground and often procumbent, it seldom rises to more than a foot in height. The lower portion is leafless, smooth, and ash-colored. The leaves, which are near the summit, seldom exceed six in number, are opposite, oblong, ovate, acute and entire, and three or four inches long. The flowers are small and white, and the fruit an ovate, obtuse berry. It flourishes in Brazil, between the 8th and 20th degrees of south latitude, in moist, thick, and shady woods. The flowers appear in January and February, during which time the root is collected. It is an important article of trade with the Brazilian merchants. The smell of the powder is peculiarly nauseous, exciting in some individuals violent sneezing, and in others difficulty of breathing resembling an attack of asthma. The taste is bitter, acrid, and nauseous. Its virtues are extracted by water and alcohol, but are impaired by boiling.

Pelletier discovered, in the year 1817, a peculiar alkaline principle in ipecac., which is called emetin, or emetia, and in which its activity resides. Emetia is a white powder. It is inodorous, slightly bitter, and very soluble in alcohol. This substance has been tried on the continent of Europe as a substitute for the powdered root, but has proved to be too violent in its action for ordinary use. The dose is from half a grain to a grain and a half, or about the twentieth part of that of the root. Among the almost countless number of medicinal substances that have been employed, to a greater or less extent, to alleviate suffering and cure disease, perhaps there is no one more valuable, or more generally applicable in the treatment of the divers diseases to which man is subject, than

ipecac. It is a perfectly safe, prompt, and efficient emetic, a good sudorific, febrifuge, and laxative. In cases of poisoning, fits, croup, coughs, colds, consumptions, fevers of all kinds, jaundice, headaches, measles, whooping cough, overloaded stomach, indigestible substances in the stomach, and depraved appetite, it is not only a suitable, but we will venture to say the best vomit known for popular use. For the whole host of croup syrups, expectorants, cough syrups, and infallible cures for jaundice and consumption, it is a good substitute, and probably is really a better medicine than most of them, whatever their pretensions. It is a simple drug, and those who may have occasion to use a medicine of the kind can at least have the satisfaction of knowing that they are not taking a deleterious mixture, most of the ingredients of which, for aught they know, may be inappropriate in their respective cases. The dose of ipecac. as an emetic is twenty grains, or about a tea-spoonful by measure, but may be given in much larger doses, or repeated any number of times, if necessary, to excite vomiting. For a child a year old, from three to five, and for one ten years old, from ten to fifteen grains are the doses usually required. As there is no danger of its producing poisonous effects if retained in the stomach, or if a larger dose be given than is requisite, it may be dosed by measurement with perfect safety, taking a heaped tea-spoonful as an average dose for an adult. Given in doses of half a grain, a grain, or two grains, as the stomach may bear every three or four hours, it is one of the best medicines in many kinds of fever, and especially those attended with cough; also in asthma, whooping cough, measles, and in bleeding from the lungs and other parts. In very minute doses it is beneficial in dyspepsia, and various other deranged conditions of the stomach and liver, exciting those organs to a healthy action, and producing a laxative effect upon the bowels. In the treatment of dysentery, perhaps there is no one medicine of more value. When combined with opium, the action of which it modifies, its controlling influence in this disease exceeds all other remedies. Ipecac. is often combined with nitrate of potash, and other medicines, in making fever powders, and it enters largely into the composition of Dover's powder, one of the most valuable compounds ever known to the profession. The dose of the wine of ipecac., which is made by macerating an ounce of the root fourteen days in a pint of Lisbon wine, is a fluid ounce, or two table-spoonfuls, for an adult, and a tea-spoonful for a child one or two years old, when given as an emetic. As an expectorant or sudorific, from twenty to fifty drops for an adult, and from five to twenty for a child. This preparation, and the syrup of ipecac., which is about the same strength, are applicable to most cases in which ipecac. is indicated. By combining the wine or syrup with laudanum or pargoric, it makes a medicine very similar to the Dover's powder, and may be given as a substitute for that preparation. The safety and efficacy of ipecac., and the great number of accidents and diseases requiring a medicine of this description, entitle it to the first rank in a family medicine-chest.

IRON. — Iron, in its simple state, is sometimes used in the form of filings, and given for worms. As medicine, we usually see iron in the form of scales, such as fall around the blacksmith's anvil, or of rust which collects on its surface when exposed to air or moisture. The rust of iron contains a portion of carbonic acid, and is often called the carbonate of iron. Pure iron filings, frequently moistened with water, soon contract a reddish or brownish coat or rust, which, when dried and ground to powder, constitutes the article in question.

The precipitated carbonate of iron is the form in most general use. The following is the method of preparing it:

Take of sulphate of iron four ounces, carbonate of soda five ounces, water ten pounds. Dissolve the sulphate in the water, and add the carbonate of soda, previously dissolved in a sufficient quantity of water; the whole to be well mixed. Wash the precipitate, which is the carbonate, and then dry it. The dose of the carbonate is from five to thirty grains.

The iodide, bromide, prussiate or Prussian blue, called cyanuret, and several other preparations of iron, are among the modern and valuable additions to medicine.

Iron is a powerful and efficacious tonic, and, in one form or another, has been used from time immemorial. In a small quantity, it is one of the constituents of the blood, and, for this reason, has been deemed peculiarly friendly to the human constitution. In springs it is poured forth in the greatest abundance, and is drank by both man and beast with impunity, if not with advantage; and, although a mineral, it comes to us in a beverage which nature has prepared.

IRON RUST — Oxide of Iron. — This is the form in which iron is principally used. In this state, it may be scraped from any old iron, and is found in a variety of mineral waters. The most natural way in which it can be used is in the form of chalybeate waters. The dose of iron rust is from five grains to a scruple. It may be taken in the form of powder, pills, or mixture. It is peculiarly friendly to the stomach and to the digestive powers, seldom failing to beget an appetite and strengthen the tone of the gastric powers. In female diseases, its efficacy as a tonic is unsurpassed. It is suited to almost all diseases of debility, and is even in those attended with a considerable degree of fever.

The vegetable tonics often produce and aggravate a fever, but iron has but little or nothing of this tendency. Insanity, dyspepsia, and nervous diseases, are often essentially relieved, and sometimes cured, by the use of iron alone.

ITCH — Psora. — The itch shows itself in small pimples between the fingers, on the inside of the arms and wrists, and about the waist and hams. The pimples will often appear in clusters in the bend of the arm and under the knee joint. The face is the only part where the eruption never appears. In a few days from the appearance of the eruption, the pimples become quite large pustules, which often spread into rotten kind of sores. The pustules contain

a watery kind of matter, which, by the constant scratching and rubbing kept up to allay the irritation, is spread wherever the fingers touch, and excites a new cluster of pimples, which in their turn pour forth new matter, and thus extend the disease over the whole surface, if not arrested by the employment of remedies. The disease is chiefly known by its incessant itching, — whence its name of the itch. It is difficult to distinguish it, in many instances, from other cutaneous diseases, excepting by its uniform symptom of itching.

It is contagious, and has its habitation chiefly in schools, poor-houses, and among people in cold, mountainous situations. It is taken by shaking hands, or by any contact with those who are infected with it. It is taken by lying in the same bed, or by wearing the same clothes, which those infected with it have used. It is supposed to be produced sometimes by bad air, unwholesome food, and a want of cleanliness.

The brimstone ointment in common use for this disease is an abominable remedy. It may be easily cured by washes and ointments which leave no smell. Take eight grains of the corrosive sublimate and dissolve it in half a pint of new rum, or in the same quantity of boiling water, and wash over all the places upon the skin which are affected, for three or four nights in succession, and the disease will be effectually cured. The citrine ointment will also cure the disease, if applied two or three times. The blue ointment is also a remedy for it, and a very efficacious one. An ointment made of calomel and hog's lard, in the proportion of a drachm of the calomel to two ounces of the lard, is a good remedy for the itch. The cream of tartar or the Rochelle powders are as good medicines to take internally, in connection with the external applications we have named, as the famous dose of brimstone and molasses.

Clean clothes, clean beds, and a clean skin, are indispensable conditions in freeing a family from the itch. Children who are washed every day and wear clean clothes, although they associate with children infected with the contagion, seldom take it. Dirt seems to furnish a nest for the generation of the disease. It has been supposed that the disease originates from the generation of little insects in the skin; but it is more probable that the animalculæ which have been discovered in the pustules are the effect, and not the cause, of the affection. All rotten sores abound with animalculæ.

J.

JALAP — *Convolvulus Jalapa*. — The dried root of jalap is brought from South America. It is the oftenest seen in the form of a powder. Its taste is bitter and sub-acrid, and its smell faint

and nauseous. It is an easy, safe, and active cathartic. The medicinal properties of jalap reside in a resin which may be extracted from it. The dose of the simple powder is from one to two scruples. It is often mixed with calomel, and given in a potion of ten grains of each. No medicine is more common or better adapted for popular use. Digested in new rum, it makes a valuable cathartic tincture. It forms an active ingredient in the elixir salutis and several other compound medicines.

JAMES' POWDER — Pulvis Antimonialis. — See *Antimonial Powder*.

JAUNDICE — Icterus. — The jaundice is one of the most common diseases in New England. In every large collection of people with which we meet, we may generally designate no inconsiderable number whose complexions denote more or less of this disease.

The jaundice is denoted by yellowness of the skin, and especially of the whites of the eyes; by sleepiness; loss of appetite; loathing of food; disinclination to move or stir about; sourness and sometimes sickness of the stomach, and vomiting. There is commonly the feeling of a load at the pit of the stomach; the urine is as yellow as the skin, and will stain the linen of a yellow color; there is a bitter taste in the mouth; and the stools, instead of the yellow, bilious color which they naturally possess, are of a clay color; the bowels are costive, and the strength and energy of the body and mind are greatly lessened. A dull pain is felt in the right side, which is increased on the application of pressure by the hand. The pulse is not often much changed either in frequency or strength, unless there should be some evident signs of an inflammation of the liver.

The most remarkable appearances in the jaundice are the saffron color of the eyes and skin, the white color of the fæces, and the deep yellow tinge of the urine. This disease is apt to be confounded with the dyspepsia, since there are always more or less dyspeptic symptoms produced by it, such as nausea, sourness and wind in the stomach, and a slowness of digestion. It is, however, an entirely distinct disease from dyspepsia, and requires a different treatment.

With us, the disease is commonly of a mild kind, and if properly treated in season is easily cured, but if neglected or maltreated, will sometimes prove fatal.

On dissection of those who have died with it, the whole body is found charged with bile. The fatty substance of the body, as well as the bones, muscles, and membranes, are found of a deep-yellow color. In this disease, the bile is diverted from the bowels, its natural tract, and absorbed by the lymphatic vessels or the secretory terminations of the veins, and diffused over the whole body.

The bile issues from the liver through a small duct, about the size of a goose-quill, which leads into the bowels, a short space below the stomach, probably about four or five inches. This duct, or little vessel, which is constructed like a vein, and conveys the bile as a vein conveys the blood, receives the bile from a smaller

vessel called the hepatic duct, and, also, from another duct which leads to the gall-bladder, called the cystic duct. If either of these three ducts become obstructed or blocked up by the thickened, hardened, or viscid bile, by gall-stones which are apt to form in the liver, or by anything which irritates these ducts and causes them to contract, the jaundice, to a greater or less extent, is produced. The hepatic duct and the common duct which leads into the intestines become filled with bile, which, having no outlet, greatly distends them, and causes pain and soreness, sometimes extreme. The pain which is felt in the jaundice is probably, for the most part, owing to a distention of the gall-bladder and the three bile-ducts which we have described. When the urine is obstructed, the stoppage of the water produces the greatest uneasiness and pain, and the same is the effect, to a certain extent, of a stoppage of the bile by a closure of the bile-ducts.

A temporary jaundice is sometimes produced by nervous affections, such as the hysterics, hypochondrism, and violent mental excitement. This is called the spasmodic jaundice, from an apprehension that the bile-ducts are closed by an extension of the nervous affection. We believe that whatever renders the bowels costive, produces a similar state in the bile-ducts; the ducts undoubtedly become contracted, and the bile moves along them more sluggishly. Perhaps it would not be very improper to say that the bile-ducts are costive. The bile in this state of things naturally thickens and hardens into cakes or balls, which finally entirely block up its passage into the intestines.

The jaundice appears to be produced by excessive heat, a sedentary life or occupation, nervous affections, and mental excitement, by the formation of gall-stones, and by marsh miasm.

Domestic Remedies.—In the commencement of jaundice, the most efficacious remedy which can be given is an emetic. This should be repeated every other day, for a week or a fortnight. A simple vomit rarely ever relaxes the system sufficiently to produce a permanent flow of the bile. The first vomit should consist of half a drachm of ipecac., or fifteen grains of the powdered leaves of lobelia, after which the vomit had better consist of a solution of four grains of the tartrate of antimony. The antimony acts more powerfully upon the biliary ducts than the ipecac. or lobelia. The thoroughwort is an excellent remedy in the jaundice. Its operation, when given in a proper quantity, resembles very much that of the antimony. Not less than two tea-cupfuls of the strong tea should be drunk at a time, and this should be repeated every day for a week or fortnight. While the thoroughwort is being taken, if it operates well upon the bowels, no other medicine need be taken. The inner bark of the barberry steeped in cider is no mean remedy in the jaundice. The food should consist of vegetables, and as much as possible of green vegetables, such as dandelions, asparagus, spinach, lemons, oranges, and wild berries. Horse-radish and pepper-grass are remarkably good in the jaundice. The yolks of eggs have been highly extolled in this disease, mixed up with sugar and taken as the daily food.

Perhaps there is no better remedy for the jaundice than sweet oil, but it must be taken in large doses. Not less than half a pint of it should be taken every day, until the fæces become of a healthy color. Two gills of it may be drank every morning and evening. Children, of course, will need to drink less of it in proportion to their age. Castor-oil, no doubt, acts a similar part in the cure of the disease, and may suit some cases better, but not more than an ounce of it need be taken at a time. A drink made by adding five drops of the muriatic acid to three drops of the aquafortis or nitric acid, and mixing both with a tumbler of water, has been known to assist wonderfully in the cure of the disease. This makes, or should make, an agreeable sour drink, and may be taken as often as the thirst demands. The warm bath, if used daily, has a powerful effect in relaxing the bile-ducts and turning the bile into its right channel.

While the vomits are being used, a dose of Lee's pills, or of calomel and jalap, should be taken the same day. Where the disease becomes protracted or chronic, it will be necessary to make use of quinine and the vegetable bitters in general; the mineral acids and preparations of iron. A regular system of moderate exercise is an essential condition in the cure; and a total abstinence from intoxicating liquors should be persisted in.

The passage of gall-stones, which is one cause of the jaundice, is attended with infinite pain and distress. The common bile-duct, as we have said before, is not larger than a common goose-quill, but gall-stones as large as a walnut have often been known to pass through it, so great is its capacity of dilating. These gall-stones consist of hardened bile formed into layers, some of which are of a black and others of a yellow color; some are very hard, and others so soft that they may be jammed between the fingers. They are commonly of an oval or round figure; the largest ones are generally of the shape of a butternut. When these stones are formed in the gall-bladder, they will often lie inoffensive through life. In the gall-bladder they have ample room to lie, without incommoding the passage of the bile into the bowels; but when they are formed in the secretory vessels of the liver and pass into the bile-ducts, or are formed in the ducts themselves, more or less disease must follow.

During the passage of a gall-stone, the pain and distress are often so great as to cause the person to roll upon the floor and to utter the most piteous cries. There is a most vehement pain about the pit of the stomach, attended with nausea, and sometimes vomiting; but the pulse, amid all this commotion and distress, is never much accelerated. Relief, in the passage of these stones, must be obtained by large and frequent doses of opium, laudanum, or, which is more proper, a solution of morphine. A tea-spoonful of the solution of sulphate of morphine must often be given, and repeated two or three times in the course of as many hours. The warm bath must be used, and large and frequent draughts of warm camomile tea drank. If the sweet oil cannot be drank and retained, strong cathartic injections must be dispensed. For this purpose

there is nothing better than a solution of tartar emetic in warm water.

Professional Remedies.—Calomel we believe to increase all the secretions. Mercury, in some form, has always been found an efficacious remedy in the jaundice. Some give it merely as a cathartic, while others prefer the administration of it in small doses. Ten grains of calomel with ten grains of jalap form one of the best cathartics which has ever been used in the disease. Many physicians rely upon this remedy, and meet with success in the cure of the disease. Another form of mercury used in this complaint is the blue pill. Two pills of the common size, given every night, followed with a dose of castor-oil or senna in the morning, is said to have been attended with more success in jaundice than any other remedy. The mercurial plaster is preferred by some, and is no doubt often attended with as much success as mercury used internally. It penetrates the liver and quickens the activity of the bile-ducts. Plummer's pill, composed of the sulphuret of antimony and of calomel, has been much celebrated as a remedy in this disease.

The acid bath has proved in many instances a powerful mean in the cure of jaundice. It is composed of diluted muriatic and nitric acid. Three parts by measure of muriatic acid is mixed with two parts of nitric acid. A pint of the combined acids is mixed with a pint of water. This mixture constitutes the diluted aqua regia. The acid bath is to consist of three ounces of this diluted acid to a gallon of water. The strength of the bath should be tried by the taste; when the diluted acid is of the right strength, it will taste about as sour as weak vinegar, and slightly prick the skin. A convenient way of using the acid bath is to pour half a gallon of water into an earthen hand basin, and then add an ounce and a half of the diluted aqua regia. With this, the feet, legs, and body, can be bathed with a sponge, or a piece of linen or woollen cloth. If the liquid produces a slight tingling sensation in the skin, it is of the right strength. A visit to the Saratoga springs and a course of the waters will always furnish a fair prospect of a cure in this disease.

When the sweet oil is used, small soapy lumps are formed in the intestines, which will often be discharged in large quantities. These should not be mistaken for gall-stones or hardened bile, because they are produced by a combination of the sweet oil with the bile in the intestines, and have no connection with the disease. As soon as the oil is suspended and some other cathartic substituted, the yellowish-green balls disappear.

If strong purges are given in this or in any disease, and continued daily for a considerable time, a large quantity of mucus will be discharged. We have seen this mucus mistaken by ignorant people for a disease of the liver or the bowels, and the necessity of more and stronger purges urged in order to bring it away. But this mucus is the natural mucus of the bowels, and is only drained off by the violence of the purges. The more physic there is given,

the more of the mucus comes away, and the bowels are in danger of being seriously injured. It is a gross mistake of the effects of medicine for disease.

JEJUNUM.—This term means empty, lank. It is the systematic name of a portion of the bowels, and is called jejunum because it is usually found empty, or only containing air. It is the portion between the duodenum and the ileum, and lies coiled directly under the navel. It is studded with lacteal vessels, which may be seen distended after a full meal.

JUNIPER—*Juniperus Communis*.—The medicinal parts of juniper are the leaves and the berries. The virtues of the tree reside in an essential oil. No grass will grow under the juniper tree. Its wood is hard and red, and the flavor of the berries peculiar. It is essentially a diuretic, and one of the best in the vegetable kingdom. The oil of juniper has some effects upon the uterine efforts. It is warming, stimulating, diaphoretic, and sudorific. An infusion of juniper berries is often given to promote the menstrual secretion, and with the most promising success. They require two years before they ripen, when they change from a green to a bluish-black color. It is the essential oil of juniper which communicates the peculiar flavor to gin. This tree furnishes a gum, called pounce or sandarach. It is an evergreen, and grows upon barren hills and dry places. In stoppages of the water, and in dropsy, the berries are an excellent medicine.

K.

KERMES MINERAL—Precipitated Sulphuret of Antimony. —This is a light, orange-colored powder. It is a good diaphoretic and diuretic. The dose is a grain or a grain and a half. It is prepared by means of sulphuret of antimony, a solution of potash, water, and oil of vitriol. It is sometimes employed in diseases of the skin, and as a substitute for the other preparations of antimony.

KIDNEYS.—These are two glands which secrete the urine, and are situated in the abdomen, opposite to the small of the back, one on each side of the back-bone, under the peritoneum. They are of the shape of a kidney bean, and weigh, in an ordinary-sized person, about a half pound. In the centre of the kidney, there is a large bag, called the pelvis, which tapers like a funnel, and forms the ureter, or vessel which conveys the urine into the bladder. Each kidney has an artery, a vein, and a duct, to carry the urine into the bladder. It also has a set of absorbent vessels which terminate in the thoracic duct. The kidney of a hog will give us a very perfect idea of that of a man. In the belly of the kidney may be seen a system of small tubes, which congregate together and terminate in the thoracic duct. The outer part of it

is very vascular, the inside is full of papillæ, and the middle full of tubes. It is of a mahogany color, much harder than the flesh, and of a different texture.

KING'S EVIL—Scrofula.—The king's evil is for the most part a disease of cold climates. Between the tropics and under the equator it is very rarely seen.

This disease, in the commencement, consists of small, hard, movable kernels under the skin, about the neck, and under the jaws. About the neck there are many little glands which secrete a watery fluid, called lymphatic glands. These glands become hard, swelled, and enlarged before there is any soreness or redness discernible. They can often be felt as large as butternuts, and sometimes as large as hens' eggs, for six months or a year before they gather and break. They sometimes form about the abdomen and groins, and in every other part of the body. The swellings will sometimes be very broad and flat, and when they come to a head will discharge a watery kind of matter, from several little round holes which look like artificial issues. The scrofulous tumors are always exceedingly slow in coming to a head, and almost as slow in healing. They sometimes discharge a pretty pure kind of pus, but in general it is mixed with a great proportion of serum. The tumors, when they are fully grown, are commonly as large as hens' eggs, and of an oval shape, a dark-red color, and more or less soft. The matter when discharged will often resemble a mixture of whey and curd. Some of the tumors will discharge an incredible quantity of matter, and others will mature by degrees.

In healing, the skin is apt to be puckered, and the abscess leaves an ugly scar. The tumors are never very sore to the touch, or very painful. Nor is the inflammation ever sufficiently vehement to produce a general fever until the disease has affected a large number of the glands. Where the scrofulous humor attacks the eyelids, it causes them to thicken, become red, and to discharge a great quantity of mucus and water. The under lids will sometimes turn out and present a hideous sight. The ball of the eye will at length become inflamed, and the use of the eye rendered painful and difficult. The disease called the white swelling is supposed to be an affection of the same nature.

The king's evil seldom attacks children before they are three years of age, or after they arrive to the age of maturity. It seems to be the most frequent between the ages of seven and of fifteen or twenty years.

To what condition of the system this disease is really owing, it seems difficult to discern. It is said to attack people of white skins, thick lips, light hair, and of delicate constitutions; but this is not invariably the case. When people are affected with this malady, they are said to have a scrofulous constitution, or temperament. But this seems to us very much like saying, when people are affected with boils, that they have a carbuncular temperament, or when affected with erysipelas that they have an

erysipelatous temperament. If the scrofulous affection must have a peculiar diathesis or condition of the system to produce it, carbuncles and the erysipelas ought also to have each its peculiar diathesis. In fact, every inflammatory humor or eruption should originate in the same way. It appears to us that there is more learning than wisdom in this theory, invented to account for the peculiar inflammation which affects the lymphatic glands.

We shall give, as nearly as we can, the history and symptoms of the disease, and leave all conjectures about its essential nature and origin to systematic writers. We wish, however, to place our readers upon their guard wherever speculation is substituted for facts. Light hair, light eyes, and a light skin, cannot certainly have any very close connection with the disease, since it is quite as common among people of color as among the whites. The doctrine of temperaments appears to us to be exceedingly lame. Black people are subject to all the diseases which affect the whites, and to apply the characteristics of the different temperaments of the whites to them would be impossible. The science of medicine in this respect must ere long undergo an entire change.

The external causes which appear to produce the king's evil are, the want of sufficient food; the want of cleanliness; living in cold, damp, impure air, and the want of exercise. People engaged in agriculture, who labor, perspire much, live upon wholesome food and in the open air, are much less subject to the king's evil than those who reside in cities and manufacturing villages. Children who play and run in the open fields, where they breathe the pure air and are exposed to the sun, follow the best method which can be invented for the preservation of health and the prevention of disease. The exercise which they take forces open the pores, and prevents the accumulation and condensation of the lymph in the glands of the body, and cleans the system of a mass of matter which only tends to disease it. Exercise gives consistence to the flesh, hardness to the bones, and strength to all the fibres. Inactivity produces despondency in the mind, as well as feebleness in the body.

Domestic Remedies.—The attention is generally drawn in the first place to the scrofulous tumors or sores. While these swellings in the neck and other parts are only hard kernels, they should be rubbed with opodeldoc or new rum. If this does not dispel them, they should be covered with a plaster of brown or white diachylon, which should be allowed to remain as long as it checks the growth of the tumor. After they become sore and inflamed, and turn to a dark-red color, the swellings must be poulticed with flax-seed meal, rye meal, or white bread. When the tops of the swellings become soft, and the skin changes to white, it shows that the tumor contains matter, and must be opened with a lancet. After the matter is discharged, the ulcers should be dressed with a little salve made of bees-wax and sweet oil; and when another tumor forms, it must be treated in the same way. If

the abscess is slow in healing, it should be washed with a solution of white vitriol or nitrate of silver.

The tumors, before they become sore and inflamed, may be washed, several times a day, with a solution of muriate of lime or of soda. These washes are somewhat new remedies, and appear to possess a good deal of power in scattering indolent, inactive swellings. Electricity and galvanism, when they are applied long enough to produce a general sweat, are capital means of scattering the condensed matter. The current of the electrical fluid should be applied for half an hour or an hour at a time.

The diet should consist of fresh meats and poultry, milk, and the most nutritious vegetables and bread-stuffs. The skin should be kept clean by washing or bathing in soap and water, or salt and water, and should be much rubbed with a flannel cloth or with the hands. It is one of the most important considerations in this disease to keep the pores open and the exhalents active. A bath, composed of cold water, impregnated with the chloride of lime or of soda in a sufficient quantity to produce a slight tingling of the skin, should be used as often as once a week, or oftener. The child, instead of being shut up in the house, or factory, or school, should be sent abroad into the open fields, or beside the sea-shore. The sea air is beyond all doubt very powerful in restoring the system to a state of health. All sores heal better in a sea air than in any other.

The coltsfoot is in good esteem in the cure of the king's evil. It is used in the form of a tea, drank several times a day. But a tea made of the sarsaparilla, and drank four or five times a day, to the amount of a gill or half a pint at a time, is said to have been more effectual in the cure of the disease than any other vegetable remedy. Prunes, dates, almonds, pine-apples, tamarinds, oranges, peaches, and raspberries, are all well suited to the condition of the system.

Professional Remedies.—The iodine stands the highest on the list for the cure of king's evil of any medicine at present in use. The iodine may be used in the following way: take one scruple of the iodine and two scruples of the iodide of potash, and dissolve them in seven tea-spoonfuls of water; of this solution give ten drops, three times a day. The dose should be gradually increased.

The muriate of barytes has, in many hands, been productive of much apparent benefit. Probably the oxide of bismuth is as good a medicine as can be used to improve the condition of the digestive organs. When the disease runs into hectic fever, the remedies prescribed for that fever will be proper in this disease.

Lemonade, soda-water, and the Rochelle powders in solution, are not only suitable, but will operate favorably upon the diseased glands. A course of chalybeate and saline spring-water should not be neglected whenever it can be prosecuted.

KINO.—This substance comes from Africa. It has the appearance of a dried extract. It is resinous, of a brown color, and

has an astringent, bitterish taste. It is exhibited internally, in doses of from ten to thirty grains, either in substance, or dissolved in alcohol. Its nature is very much like that of the catechu. It is employed in dysentery, diarrhœa, fluor albus, hemorrhage from the womb, and other diseases arising from a relaxed state of the solids.

L.

LACTEALS.—The vessels which secrete the chyle from the intestines. They are very delicate and transparent, intersected with a great many valves, and when filled with chyle present a knotty appearance. They arise from the inner surface of the villous coat of the bowels, perforate the other coats, and form a kind of network,—the greater part of them uniting with one another between the muscular and external coats. From the intestines they penetrate through the folds of the mesentery to the conglobate glands, and by a variety of coils they mainly contribute to the formation of the gland through which they pass. The conglobate glands are a knot of small vessels which lie in the tract of the lacteals and lymphatic vessels, as they ascend to form the thoracic duct. The lacteals convey the chyle, a milky fluid, from the organs of digestion into the thoracic duct, and the lymphatics are an extensive system of minute transparent vessels, which convey the lymph, a watery fluid, into the same duct. This duct is first apparent where the diaphragm or midriff crosses the chest, and increases in size until it reaches the junction of the left subclavian and jugular veins, where it empties. The size of its largest part is about that of a crow's quill. The absorbents, composed of the lymphatic and lacteal vessels, and running from almost every part of the body, empty their contents into this duct. The lacteals form what is called the chylopoietic system, or the system which elaborates and takes up the chyle. The food and drink, formed into chyme in the stomach, passes into the small intestines, where it meets with the pancreatic juice and the bile, and is converted into the milky fluid called chyle. The lacteal vessels are chiefly confined to the small intestines. By the help of a magnifying glass, an infinite number of them may be seen issuing from the rough, shaggy coat of the bowels.

LACTUCARIUM.—This is the dried juice of the lettuce. It is obtained by making little cuts with a knife into the stalks of the lettuce plant, whence the juice exudes, is collected, and dried. It has a bitter taste, a brown color, and becomes soft by moisture. It was in high esteem among the ancients as a narcotic. The juice of the lettuce resembles milk, having the consistency of cream. Some physicians have preferred it to opium. Its effects upon the system are nearly the same with that narcotic. It is

said, however, to be more peculiarly a sedative, without the stupefying effects of opium. It can be given where much nervous excitement exists, and where a pure sedative is needed. It is well suited to allay a cough, and to quiet a fit of hysterics.

The dose of lactucarium is from one third of a grain to three grains. It may be dissolved in or mixed with water, or given in the form of a pill.

It is a medicine which ought to come into general use. Its properties are highly medicinal, and its exhibition comparatively safe. A large dose of it, however, is to be avoided, as it produces the same symptoms as an over dose of other narcotics. To diseases of children, the lactucarium appears to be a medicine remarkable well adapted.

LARYNX.—The larynx is the top part of the windpipe. The upper rim of it is formed by the glottis and the cartilaginous lid which is called the epiglottis. It is formed of four or five cartilaginous rings, which make it very stiff and hard. It is the principal organ of the voice. Only a slight inflammation of the larynx destroys the voice entirely.

LAUDANUM—Tincture of Opium.—Put two ounces of opium, broken into pieces, into a quart of new rum or proof-spirit, and let it stand for a week, and then strain the liquor. The proportion of opium to the spirit is five grains to a drachm or tea-spoonful, which is reckoned sixty drops. The usual dose for an adult is twenty-five drops, though more or less may be given, as the case requires. A tea-spoonful is a large dose, and can be given only in extreme pain and distress. The common dose for a child between one and three years old is from three to seven drops; for a child six months old, three or four drops. One drop may be given to a child a month old.

LAVENDER—*Lavendula Spica*.—There are two varieties of the lavender plant. The flowers of both have a fragrant, bitterish taste. It is a native of England, but is often cultivated in New England for the sake of its perfume. It is a small, shrubby, perennial plant, and the best sort has a broad leaf. This sort yields as much again essential oil, and is much hotter and heavier than the other. The lavender is a warm aromatic. The essence is much used in the form of what is called the red lavender. It is an excellent carminative and stimulant in cases of wind colic, pain in the stomach, and faintness.

LEAD.—Lead in its metallic state is not used as a medicine. When converted into rust or oxide, by the action of air and moisture upon it, or into a salt, like the sugar of lead, by the action of an acid, it operates medicinally. White lead or ceruse is astringent, cooling, and absorbent. Sprinkled upon ulcers and running sores, it is often of no little service; but its principal use is confined to the composition of ointments and plasters. Taken internally, it is a powerful and dangerous styptic, producing, in a large quantity, colic, palsy, tremors, and death. Red lead and litharge, like

ceruse, are used externally in the forms of powder, plasters, and ointments.

The iodide and tannate of lead have lately been tried as external applications to glandular swellings and old ulcers, with apparent benefit. Iodide of lead is of a bright-yellow color, soluble in boiling water, which, on cooling, deposits the iodide in shining, yellow, crystalline scales. It is much less soluble in cold water.

LENITIVE ELECTUARY.—As a laxative medicine this is one of the best in use. In the case of the piles it is worth all the other remedies which we have ever tried. It is composed of eight ounces of senna, four ounces of coriander-seeds, three ounces of liquorice, figs and pulp of prunes each one pound, tamarinds half a pound, double refined sugar two pounds and a half. Powder the senna with the coriander-seeds, and sift out ten ounces of the mixed powder. Boil the remainder with the figs and liquorice, in four pounds of water, to one half; then press out and strain the liquor. Evaporate this strained liquor to the weight of about a pound and a half; then add the sugar and make a syrup; add this syrup by degrees to the pulps, and, lastly, mix in the powder.

A mass of it of the size of a nutmeg is the common dose. The taste is not disagreeable, and it seldom disturbs the stomach. In cases of costiveness, it excites an easy motion of the bowels.

LEPRA.—A systematic name of the disease called leprosy. See *Leprosy*.

LEPROSY—*Lepra*.—The leprosy is not a common disease in New England. In the hot climate of the West Indies it is said to be much more common and much more severe. This disgusting humor first makes its appearance about the elbow and the back of the arm between the elbow and the wrist, but especially about the knee. It comes in little red shining bunches in the skin, which gradually enlarge until they reach the size of a silver dollar. The bunches have an oval shape, and are covered with a dry scab, or rather scale, and surrounded by a red rim. The red bunches in the skin contain no fluid, and appear to be a circumscribed inflammation. The distemper will continue in this state for a long time. In its progress, it diseases the skin of the face, forehead, and ears, the eyebrows and the nose. The skin thickens, and grows rough and scaly. The wings of the nose become thick, swelled and scabby, the eyebrows and beard fall off, the nostrils ulcerate, and the voice becomes hoarse. The lobes of the ears become greatly thickened and affected with hard bunches and scabs, the breath is highly offensive, and putrid sores arise in various parts of the body. It sometimes proves fatal, but in our climate it is for the most part a harmless though disagreeable distemper. It commonly removes the hair from the surface of the body wherever it strikes, and leaves large white scars in the skin. It is the most scabby disorder with which we ever meet. When the humor arises at the point of ulceration, it is supposed to be highly contagious. It is attended with a considerable degree

of irritation and itching, and, when the skin is broken, discharges a watery fluid.

It appears to be caused by a filthiness of the skin, poor living, improper food, cold, dampness, and depression of spirits. In Egypt, the Barbary states, and in Asia Minor, it prevails continually. In the cure of leprosy, the first thing to be done is to cleanse the skin and to keep it in a state of softness. Warm water dilutes the acrid discharge and lessens the inflammation. It should be kept in mind, in the treatment of all cutaneous eruptions, that they are inflammations, which, though for the most part chronic, must be influenced more or less by all those remedial agents which are employed in inflammatory affections in general. A rigid adherence to a vegetable diet is another cardinal condition in the cure of the leprosy. All sorts of animal food, fish, butter, and salt meats, must be avoided, and bread, potatoes, custards, and fruits, substituted. Lime-water has been highly recommended as a wash. Ointments made of the narrow dock and the inner bark of the elder are cooling appliances for the inflamed surface. Solutions of alum and borax may be applied to the ulcerated parts. The spermaceti ointment spread over the skin will assist in the healing of the humor. A table-spoonful of the buckthorn syrup, taken every day for a week at a time, will be found a cooling remedy. The sarsaparilla tea is a highly approved medicine in the cure of the disease.

An eighth of a grain of corrosive sublimate dissolved in hot water, given every day, has sometimes been useful. The cream of tartar, in a dose of a table-spoonful daily, given for a week at a time, often drains the system of an excess of watery fluid. In long-continued cases, the quinine, iron, and the mineral waters should be employed. The hot sulphur springs of Virginia should be tried. A good dry air should be sought, and sufficient exercise should be taken every day to raise a gentle perspiration. A weak solution of the oil of vitriol, applied as a wash to the skin, is said to have cured the leprosy. But the medicine we have found the most generally useful is the Fowler's solution of arsenic. This is an old, established remedy.

LETHARGY. — A mild species of apoplexy. It is a symptom of several diseases. It is a deep, heavy sleep, from which it is difficult to awaken the person; and when once awake, he falls immediately to sleep, with no recollection of what has past or been said. It appears to be a certain degree of palsy of the brain, but more recoverable much than apoplexy. It is most apt to affect old people. The remedies are the same as for apoplexy. See *Apoplexy*.

LEUCORRHŒA. — A disease peculiar to females. See *Whites*.

LIENTERY. — This is a disorder in which the food and drink are passed in an undigested or unaltered state, very soon after they are swallowed. The disease is not commonly distinguished from a looseness or diarrhœa. Nursing children are often the subjects of it. It attends protracted cases of diarrhœa and

dyspepsia. Everything taken into the stomach, — milk, broth, bread, fruit, meat, and cheese, — goes through the body nearly in its entire state. The action of the gastric juice is powerless, and the bile obstructed. There is often a good appetite and never much pain.

The stomach and bowels are affected in a great variety of ways. In one affection, the discharges will consist almost entirely of mucus; in another, of chyle, or a milky fluid; in a third, of bile; in a fourth, of a watery matter or whey; in a fifth, of blood or a bloody matter; but, in the disease before us, all the alimentary secretions appear to be suspended, checked, or inert. Solid substances in the stomach can even be felt, and their motion along the tract of the canal recognized.

Remedies. — In nursing children, the food should be changed to arrow-root gruel or bread-water. If sourness prevails, the chalk julep, or a little calcined magnesia, should be given. The stomach at the same time must be strengthened with a little camomile tea, infusion of columbo, or quinine, in powder or solution. Sometimes, a little brandy with milk or water will be useful. A few drops of essence of peppermint, or cinnamon, will quiet the stomach and bowels. Minute doses of calomel will often remedy the difficulty.

In grown people, a similar course should be pursued. Carminatives, alkalies, and tonics, are the most effectual remedies. Astringents and anodynes are sometimes required in connection with cathartics. The digestive organs should be strengthened and the alimentary secretions promoted. The food should be simple, light, and nourishing, and taken in small quantities.

Rhubarb, carbonate of iron, oxide of bismuth, soda, magnesia, a little opium, logwood tea, and Iceland moss, are all proper and efficacious. Nutmeg, both for children and adults, is a very excellent medicine, either in powder or infused in port wine. It should be given in a dose of ten or twenty grains. Perhaps no remedy is equal to it.

LIGAMENT. — The strong, elastic membranes which connect the ends or heads of bones. Those which enclose the heads of bones and contain the synovial juice are called *capsular* ligaments. The others are called *connecting* ligaments. Some of the last are round white cords, inserted into the end of each bone. The ligaments hold the bony system together, and are subject to a vast amount of labor. It is no wonder, therefore, that the joints should often be subject to inflammation or rheumatic diseases.

LIGHT. — The influence of heat and cold, of moisture and dryness, of air and food, upon the body, has received a very thorough examination, but the influence of light has hitherto been scarcely noticed. Light, aside from its agency in the formation of images of material objects upon the retina of the eye, has no small effect upon the body. It is a great stimulus. Too great a quantity will irritate the eye immediately, and cause a flow of tears, or the secretion of an undue quantity of mucus. A constant

exposure to the light of the sun will turn the skin brown, and the entire absence of light will turn the skin to a sickly paleness. The spirits of people are much more lively in the light than in the absence of it. Night is the time for melancholy, vapors, gloom, fear, and despondency. There are few people who have not more courage in the day-time than in the night. This effect cannot be owing entirely to the influence of ideal associations, although such associations may have some influence. A cloudy day will produce something of the same kind of mental depression as a dark night. Here there is but very little room for ideal associations to have any influence, since in mere clouds there is nothing to occasion either fear or despondency; there is an absence of light, but not enough to interfere with our safety or pleasures. People whose nerves are extremely sensitive will often feel a degree of depression in the sudden passage of a cloud over the sun's disk. The nervous excitement is suddenly diminished by an abstraction of light. We have never seen a person who had lost his sight who was capable of that degree of gayety which is common to other people. To be much in the light we conceive to be extremely conducive to the health. A brown skin is, no doubt, more healthy than a pale skin, all other circumstances being equal.

Vegetables which grow in the shade, where they experience an equal degree of heat and air with those grown in the light, are of a different color, texture, and quality; they seldom reach maturity, and some never bear fruit; they are feeble and sickly. Light is a different substance from heat; for a body may be heated in the dark, and a degree of warmth is created in the human body greater than that of the highest summer heat without the generation of light.

We think there can be no doubt but the circulation of the blood is considerably influenced by the action of light upon the retina of the eye and upon the skin. As we have before said, light is a stimulus, and this stimulus is necessary to the proper action of the vascular system. People, therefore, should court the light, and learn to consider it one of the great constituents of the strength and health of the body.

LIGHTS — The Lungs. — The organs by which breathing or respiration is performed.

LIME. — Quick-lime is an escharotic. Applied to warts, it will effectually destroy them. It may also be applied with good effect to foul sores, and ulcers, by sprinkling over them the fine powder.

LIME-WATER. — Lime-water is an excellent medicine to correct a sour stomach, and to neutralize acids in general. It destroys worms, and, used in moderation, strengthens the digestive organs. In dyspepsia and flatulence, it is used with signal benefit. It is astringent, and sometimes given in diarrhœa, diabetes, and the whites of females. It is made in the following manner.

Take half a pound of lime recently burnt, and sprinkle upon it,

in an earthen vessel, a gill of water, either cold or hot; close the vessel, while the lime grows hot and falls into powder. Then pour upon it six quarts more of pure water, and shake the whole until the lime and water are thoroughly mixed. After the lime has settled to the bottom, shake the vessel again, and let the mixture settle; and so on, eight or ten times; and be mindful to keep the air out, as that will neutralize the lime. Lastly, strain the mixture through paper, placed in a funnel, and keep the solution in a close bottle.

The dose of lime-water is half a wine-glassful, increased to two. Mixed with warm milk, the taste may be rendered quite tolerable.

LINIMENT. — An ointment, or balsam. The most common liniment is that called the volatile liniment. It is made by shaking together in a phial two ounces of olive oil and two drachms of water of ammonia.

Another, often used, is the liniment of lime-water, made by mixing together eight ounces of olive oil, eight ounces of lime-water, and one ounce of alcohol. The volatile liniment is used chiefly in inflammatory affections; the liniment of lime-water, for burns and scalds.

LIQUORICE. — This plant is a native of the south of Europe. It comes to us in bundles of little sticks about the size of the stems of a currant bush. It has a sweet, agreeable taste, and contains saccharine and mucilaginous matter. An extract is easily made from the stick, and when refined is preferable as a medicine to the stick. Liquorice is much used in coughs and colds, and is both a pleasant demulcent and a safe expectorant. It appears to have considerable effect upon the mucous membrane of the lungs. Steeped with flax-seed, or slippery-elm bark, it makes a good domestic medicine for hoarseness and influenza.

LITHONTRIPTIC. — Medicines which dissolve the stone in the bladder, such as solutions of soda and potash, lime-water, ammonia, and magnesia.

LITHOTOMY. — The operation of cutting into the bladder for the extraction of a stone. It is one of the most formidable operations in the practice of surgery. The method commonly employed, is that of making an opening through the perineum and neck of the bladder. By this method the prostate gland is cut laterally, and an opening made large enough to extract a stone of any ascertained size. The opening is sometimes made just above the pubes. In this part, the bladder is not covered by the peritoneum.

LITHOTRITY. — The operation of breaking up stones in the bladder, by means of a drill introduced through the urethra, and enclosed in a delicate pair of forceps, which open after they are passed into the bladder, and grasp and hold the stone until it is drilled through. The drill is turned by means of a bow. After all the stones are broken into fine pieces by the drill, they are easily passed in the water. In France, this method of ex-

tracting stones from the bladder is practised more than lithotomy. Our countrymen have been extremely backward in adopting the improvement.

LIVER — *Hepar*. — The liver is the largest glandular body in the human system. It is situated principally in the right side, in the upper part of the abdomen, immediately below the diaphragm, and occupies the whole right hypochondriac region, a part of the left, and the upper half of the right epigastric regions. Its length is about ten inches, and its width six or seven, and it weighs from four to five pounds. The whole upper surface of the liver is in contact with the diaphragm; the principal part of the large or right lobe is covered by the lower ribs of the right side, and the small or left lobe is over the stomach on the left side of the median line, being bounded on this side by the spleen. The upper part of the liver is thick, and the lower thin, tapering down to an edge. It is convex and comparatively regular externally and anteriorly, and flat and irregular on its posterior or internal surface. It is divided by several fissures into four portions, called lobes, the two principal of which are the right and left, and the two smaller are called the lobe of *spigelius* and *lobulus quartus*, or fourth lobe. Being completely enveloped by the peritoneum, its surface is perfectly smooth and glossy, and its color is a reddish-brown, frequently more or less spotted with blue or dark-colored patches on its under surface and about the edges, which are not, however, an indication of disease. The liver is retained in its situation by a number of ligaments, the most important of which are the *falsiform*, or *suspensory*, beginning at the umbilicus, extending along the *linea alba* and middle line of the diaphragm, and being attached to its upper surface; the right lateral and the left lateral coming off from the back part of the diaphragm, and attached to the posterior surfaces of the right and left lobes respectively. The round ligament is the remains of the umbilical vein, through which the blood passes from the umbilicus to the liver in the foetal state, and is contained in the anterior margin of the suspensory ligament. The ligaments are formed by the peritoneum, a thin, firm, serous membrane, which completely invests the liver. By being reflected from it to the walls of the abdomen and back part of the diaphragm, in folds, it forms strong attachments to these parts, admitting however of some degree of motion. The substance of the liver is exceedingly fragile and easily lacerated, and has a granular appearance. It is very vascular, being bountifully supplied with blood from two very different sources. The nourishment of the organ is supplied by the hepatic artery, a branch of the *cœliac* which comes off from the abdominal aorta, near the last dorsal vertebra. The hepatic artery divides into three principal branches, going to the principal lobes of the liver, and these are subdivided into innumerable smaller branches, which are distributed to every part of its substance. The blood from which the bile is secreted is venous, and is derived from the stomach,

intestines, pancreas, and spleen. The veins from all these organs run together into one large vessel, called the *vena portarum*, which enters the liver by two branches, one of which goes to the right or largest lobe, and the other to the other three lobes. The blood is returned from the liver into the general circulation by three large vessels called hepatic veins, which, after uniting into one, empty into the ascending vena cava, just below the diaphragm, and near the liver. The gall-bladder, which is an appendage to the liver, is attached to the under side of the great lobe, and serves as a reservoir for the bile, secreted at times when it is not necessary that it should be conveyed directly to the bowels. The gall-bladder will contain about a gill, and, like the intestines, consists of three coats, the outer one of which is composed of peritoneum; the other two are the cellular and mucous coats. From the gall-bladder there is a duct opening into the duodenum, about four inches below the stomach. The bile in the liver flows into a great number of small vessels, called biliary ducts, which uniting form a principal one, the hepatic duct. The hepatic duct joins the duct coming from the gall-bladder, called the cystic, forming a common duct, called *ductus communis choledochus*. By this admirable arrangement of the gall-ducts, it will be seen that the bile may flow directly on into the duodenum, or, if uncalled for at the time, may regurgitate into the gall-bladder, to be reserved until it is needed. The greenish-yellow with which the bowels, and other parts in contact with the gall-bladder, are tinged, is occasioned by the transudation of the bile after death.

The liver is a gland, or rather, perhaps, a congeries of an infinite number of small glands, the function of which is to secrete or produce the bile from the blood, and to discharge it through its ducts into the duodenum or second stomach, where it serves some important and highly essential purposes, by being commixed with the nutriment after it has gone through the first stage of digestion. The part which the bile performs in the animal economy has until recently been very imperfectly understood; and even now, after the most elaborate researches into animal chemistry, the precise office which it performs in being mixed with nutriment, the full extent to which it is essential to animalization, the production of heat by the combination of its carbon with oxygen, the necessity of its being separated from the blood, and its effects in exciting the bowels to a healthy action, are far from being satisfactorily explained. Physiologists formerly considered it merely an excretion, or something that was necessary to be thrown off from the system, to depurate the blood and other fluids, and to stimulate the bowels; but the small quantities detected in the ingesta of a healthy animal, compared with the quantity secreted by the liver, is strong presumptive evidence that this opinion is too limited, and that it has other and probably more important uses. It appears probable, from the statement of the most modern physiologists and chemists, that in a healthy condition of the system a large proportion of the bile, after being mixed with the chyle, is taken up with it by

the lacteals, and returned into the blood, and goes again the rounds of the general circulation, yielding its different constituents in the formation of new animal compounds; and its carbon, uniting with the oxygen of the blood, which has been received in respiration, contributes to the production of animal heat; and its carbonic acid and water are given out through the skin and lungs.

The quantity of bile secreted by a man is estimated at from seventeen to twenty-four ounces daily; by a large dog, thirty-six ounces; and by a horse, thirty-seven pounds,—far exceeding in weight the *fæces* discharged in the same time, and from forty-five to fifty-six times as much as can be found in the *fæces* by chemical analysis.

When the stomach is full, and its motion quickened by the process of digestion, an action is communicated to the gall-bladder, by which the bile is pressed out, and poured into the first portion of the intestines; but when the stomach is deprived of food, it contracts, resembling a portion of intestine, and the bile is retained in the gall-bladder; and hence it is found distended in animals that have died of starvation. The theory of the functions of the bile here briefly referred to, should it be confirmed by further experience, must expose the absurdity of the popular practice of frequently taking powerful emetics and cathartics with the view of “purging off the bile.” By many, the bile is considered one of the greatest enemies to health,—a kind of vulture eternally gnawing upon the vitals of man; and under this mistaken notion their whole broadside of pills is directed against it, in the hope of exterminating the dreaded foe; but, happily for them, the secretion still goes on, and the system is soon replenished. We have long protested against this practice, having been convinced, by observation and experience, that the lives of multitudes have been rendered uncomfortable, and have been much shortened, by the frequent use of Hygeian, Brandreth’s, Anti-bilious, and many other pills, with which people have been deceived, like children, by designing men, who would not scruple to ruin the health of a nation to make their own fortunes. It is to be hoped that the eyes of the community will be opened to these deceptions, and their understanding sufficiently enlightened to detect the absurdity of the false philosophy by which these quack medicines are cheated down their throats. It is almost superfluous to add, that animals seldom if ever require, nor have we reason to believe that they resort instinctively to, medicinal plants for this purpose; and, notwithstanding they secrete quite as much bile as man, they generally enjoy uninterrupted health. Active cathartics, however necessary they may occasionally be as a means of curing disease, cannot be resorted to with even as much propriety as blood-letting, as they derange the digestive function, and, by quickening the action of the bowels, carry off the nutriment, thereby preventing nutrition; and, by promoting too much the secretions and excretions, impoverish the blood and lessen its quantity.

LOBELIA — Emetic Weed — Indian Tobacco. — This plant is,

when grown, one or two feet high, with oblong leaves, slightly serrated, or indented like a saw. It is annual, and native to our soil. It was in as high esteem among the Indians as it ever has been with us. The blossoms are of a pale color, and solitary. Its capsules are inflated with numerous small seeds. It flowers in July or August, and is found in dry fields, and among barley and rye stubble.

The leaves are the part chiefly used as medicine. Their taste is at first insipid, but soon produce a pungent sensation, and a copious discharge of saliva. A few swallows of the juice produce extreme nausea and vomiting, with giddiness, pain in the head, and a tremor of the whole body. Its taste and its action somewhat resemble that of tartar emetic.

In a dose of from ten to fifteen grains of the powdered leaves, it is found to operate as a speedy emetic. It ought always to be given by weight. Thirty grains of the leaves may be steeped in a gill of water, and a table-spoonful given every fifteen minutes until it operates, or rather until one half of the tea has been taken; after waiting an hour, the other half may be given in the same way.

The lobelia can be made into a tincture by adding two ounces of the dried leaves to one pint of new rum. The tincture is the most suitable for children. A child one or two years old may take from twenty to sixty drops, increased as the occasion may require. An adult may take a tea-spoonful at a time, repeated if the proper effect is not produced. The lobelia is an excitant of all the secretions, — perspiration, urine, phlegm, bile, and saliva. For popular use it is not perhaps a more unsafe medicine than antimony; and, if the same caution is used that people employ in the administration of other active remedies, it may be made an exceedingly serviceable emetic. Domestic herbs and plants are all used with too little discrimination, and lobelia has sometimes been used without weight or measure. This evil should be corrected.

It yields an extract in considerable abundance, which may be given in the dose of a grain, repeated as the occasion may require.

The efficacy of lobelia, in asthma, influenza, and pulmonary diseases, is beyond dispute equal to that of the best vegetable productions. Where it does not cure, it produces the most signal relief. Upon the pulse in inflammatory diseases, given in small doses, it has the most striking effect. In lung affections of children, it moderates the circulation, opens the pores, and lets loose the emunctories of the whole system. It operates as an emetic, cathartic, diuretic, expectorant, and an emmenagogue. In small doses, it abates the violence of a fever, and controls the action of the heart in cases of dropsy. With proper care, and in suitable doses, it is a powerful agent in equalizing the circulation of the blood. It exerts no inconsiderable influence upon a cough, and may be taken with signal advantage in consumption.

LOCKED JAW — Tetanus. — This affection, which takes its name from the circumstance of the jaws being commonly rendered

stiff and immovable, arises for the most part from wounds, such as punctures, cuts, and lacerations; it is said, however, to arise sometimes from irritating substances in the stomach, and exposures to cold while the pores are open and the body is in a profuse perspiration. The locked jaw is much more frequent in warm climates than in cold ones.

The symptoms of the disease commonly show themselves in about eight days after the occurrence of the injury which is the cause of it. It commences with a gradual stiffening of the muscles, particularly those in the back part of the neck; the motion of the head becomes difficult and painful; there is a difficulty of swallowing; a great tightness about the chest; the jaws are fast locked together; the teeth set; and a pain felt darting from the breast-bone to the back-bone. In many cases the contraction of the muscles is confined to the jaws, neck, and chest; but in others a universal spasm seizes the system, and the body is twisted into a variety of positions. Sometimes the body is thrown backward, and at others forward. In the worst cases, the whole system is shaken with spasms; the tongue is darted out of the mouth, and injured between the teeth; the arms are immovably stiff; the abdominal muscles are convulsed; the bowels are obstinately costive; the legs extended and stiff; the eyes set in their sockets; the pulse irregular; the countenance hideously distorted; and the strength exhausted with the violence of the spasms.

The spasms are subject to remissions, which last for ten or fifteen minutes, and are renewed, until the strength is worn out, and death puts an end to the scene. During the remissions, if the patient attempts to speak, drink, or alter his position, the spasms are renewed.

It is not a little remarkable that all this while the person is in the full possession of his senses, and no fever is discoverable. The locked jaw, when it arises from wounds, is almost always fatal. Gunshot wounds and lacerations are the most likely to produce it. It sometimes follows surgical operations. A very quick pulse in the early stage of the disease is a bad symptom.

On dissection of those who have died of this disease, no inflammation of the injured nerve has ever been discovered, and consequently cannot be assigned as a cause of the affection.

Remedies. — As the locked jaw arises almost entirely from injuries done to the muscles, cords, and nerves, it is of the first importance to excite a healing process in the part which is wounded, and to allay the anguish and pain which ensue.

In the case of a puncture, laceration, cut, or wound of any kind, particularly a gunshot wound, the patient should take forty or sixty drops of laudanum, or an equal amount of some other opiate, as a preventive of the future spasms and cramps, and should be kept under the influence of opiates until the wound has begun to heal. After an opiate has been given, the splinter, nail, ball, needle, shot, or whatever substance remains in the wound, must be drawn out or removed. A tea-spoonful or two of laudanum must then be

poured upon the injured part, which should be covered with a soft, warm bread or flax-seed poultice. This dressing should be renewed twice a day, for eight or ten days. Even in slight punctures from needles, pins, nails, and other sharp instruments, an opiate should be given, especially in the case of children, and the wound bathed with laudanum or a solution of morphine. Much more can be done to prevent the locked jaw than to cure it after it has happened.

If the disease comes on suddenly, and the jaws are fast locked together, two tea-spoonfuls of laudanum should be given by way of injection, in a little starch or gruel. The room should be kept comfortably warm, and the drinks should be of a stimulating nature, such as wine and water, brandy and water, and peppermint tea. The disease has been cured by wine alone. The smoke of a lock of burnt wool or a piece of flannel, applied to the injured part, is no mean remedy.

In some instances the cramp comes on after the surface of the wound has healed. In this case, the wound has been opened, and the spirits of turpentine dropped into it, in order to excite an inflammatory action. The practice should be followed where the ordinary means fail. The warm bath should always be tried, and the water should be impregnated with a little common pearlashes, or nitro-muriatic acid. It is sometimes necessary to extract two or more of the teeth where the jaws become immovable, in order to introduce medicine and nourishment. In addition to opium, camphor, musk, castor, cicuta, belladonna, ether, and assafœtida, are often given to allay the spasms.

The inhalation of nitrous oxide gas should be tried.

The carbonate of potash, alternated with opium, has been employed internally with success. Electricity and galvanism should be tried. The bowels should be moved every day by some mild cathartic, such as castor-oil, salts, or magnesia, and a perspiration excited and kept up by the use of small doses of ipecac., lobelia, James' powder, or the Dover's powder. The secretion by the kidneys should be promoted by the use of nitre and warm diluent drinks. The food should be gruel, bread-water, or weak milk porridge.

Where tetanus or locked jaw arises from severe wounds of the limbs, it is recommended by some to amputate immediately. Mercury is said to have been employed with success where it has been given in sufficient quantity to produce salivation.

The means used to excite a healthy inflammation in the injured part are the lunar caustic, spirits of turpentine, and alcohol. Quinine should be given after the spasms have subsided.

LOGWOOD. — Logwood is a valuable astringent. It is safe and efficacious, either for children or grown people. An ounce of the ground logwood, boiled in half a pint of water, and the tea given in the dose of a table-spoonful or two, every two or three hours, will often restrain the most obstinate chronic diarrhœa, dysentery, or cholera infantum. Its strength and dose may be gradu-

ally increased. A child a year old may take a tea-spoonful. In some diarrhœas of long standing, we have given a tea-cupful to a grown person.

LUMBAGO. — This disease is a rheumatic affection of the small of the back. It consists in a greater or less degree of soreness and pain in that part of the body. It prevents the person from bending the body or stooping forward without producing pain. It is sometimes called, when it exists in a slight degree, a crick in the back. It is produced by cold, and by straining the back in labor or lifting. It is often brought on by carrying a pail of water or hod of coal up stairs. It is a disease which affects shoemakers, and all people who exercise the back more than other parts of the body. The disease, by neglect and an obstinate persistence in the species of work which causes it, sometimes ends in a stiffness and crookedness of the back, which make the person bend forward. It is more especially a disease of laboring people.

The pain and soreness, in the commencement, may generally be removed by sufficient rest, and by producing a free perspiration. Two or three Dover's powders, of ten grains each, taken at intervals of three hours, together with hot-pennyroyal tea, and lying a day or two in a warm bed, will usually restore the health.

A large mustard poultice applied to the back, or a large pitch plaster, will often restore the back without any other remedy. The poultices or plasters must be large, or they will be of no permanent service. A plaster of shoemaker's wax will cure the complaint. If the pain and soreness are severe, the volatile liniment, mixed with a tea-spoonful of laudanum, should be applied to the back, and a few drops of morphine taken to ease the pain. A flannel shirt should be worn, and the body kept warm.

LUMBAR ABSCESS. — The seat of this abscess is in the muscles which lie upon the inside of the loins. These muscles, called the psoas muscles, are what in some of the lower animals are called the tender loins. They are large, thick, and fleshy; and when inflammation arises in them spontaneously, or from mechanical injuries, it ends in a large abscess, or cavity filled with matter. As the matter cannot escape through the back-bone without destroying it, it most commonly makes its appearance in the lower part of the belly, just above the groin. Lumbar abscesses will often increase to the size of a two-quart bowl, and larger. They are commonly a long time in forming, and seldom show any external signs of inflammation, such as redness and soreness, until just before they break. The swelling or tumor is commonly the first intimation of the disease. The matter in the tender loins seems to form by stealth, and seeks its way to the surface by a blind, circuitous route. There is seldom much pain or soreness in the back; the most that is felt is a sense of weight, uneasiness, and frequent chills. There is sometimes a disease of the bones of the back which occasions the lumbar abscess, and at other times the abscess will occasion a disease of the vertebræ.

The most that can be done in the treatment of this disease, in

our present state of knowledge, is to strengthen the system by a free use of quinine, the rust of iron, the mineral acids, and nourishing food. Wine and ale may also be used during the formation of the pus. A grain of quinine should be taken three times a day. Fifteen drops of elixir vitriol should be taken as often, in half a tumbler of water.

Lumbar abscesses are sometimes opened with a lancet or trocar, and the matter discharged, but of late years it has been thought better to allow them to break of their own accord.

LUNAR CAUSTIC—Nitrate of Silver. — This article is made by the combination of aquafortis with silver. Eight ounces of the acid is diluted with four ounces of distilled water, to which four ounces of pure silver plates, cut into pieces, are added. The silver is dissolved in a phial with a gentle heat, and evaporated to dryness. We commonly see it in shops in the form of little sticks, about the size and length of a common lead-pencil. It is solid, of a greyish-black color, and when dissolved in water makes an indelible stain upon the skin. It is a strong caustic to the flesh, and is in the most common use for consuming proud flesh, callous edges, scirrhusities, warts, corns, fungous excrescences, and strictures in the urethra. Of late, it has been used for touching indolent inflammations, ulcerations, and canker spots in the throat. It will effectually destroy the venereal poison of chancres.

Some have employed it internally in dropsy, epilepsy, and angina pectoris. The dose is from a twelfth to a quarter of a grain, dissolved in distilled water, and made into a pill. A solution of it has been used for an injection in cases of gonorrhœa. Employed internally, it operates as a cathartic, destroys worms, and brings away a large quantity of water. Well and spring water decompose it; hence it must be dissolved in distilled water.

LUNGS—*Pulmones*. — The organs of respiration. The lungs occupy the greater part of the thorax or chest, which is the cavity included between the sternum or breast-bone in front and the back-bone behind, the ribs and intercostal muscles on the sides, the clavicles or collar-bones above, and the diaphragm below. The heart is the only other organ occupying much space in the cavity of the chest. The size of the lungs, therefore, must bear an exact proportion to that of this cavity. Unlike the liver, the largest part of the lungs is below, and each lung forms an irregular cone, with its apex just behind the collar-bone, and its base resting upon the diaphragm. The surface of the lungs corresponding with the insides of the ribs is rounded or convex; but that surface that looks towards the opposite lung is concave, in consequence of the space taken up by the heart. As the diaphragm is convex on its upper side and concave on its under side, the lungs in resting upon it are somewhat concave on the bottom. There are two principal lobes to the lungs, the right and left, which are separated from each other by a membranous partition formed by the pleuræ, called the mediastinum. This partition is formed by two portions of the pleuræ, which come off from the spine; and the

heart, enveloped by the pericardium, is placed precisely in the centre between them, with its apex inclining to the left. The right lobe of the lungs is divided by two deep fissures into three smaller lobes, and the left lobe by one fissure into two lobes.

The external surfaces of the lungs are in contact with the walls of the thorax, but do not adhere to them except in those cases in which morbid adhesions have taken place from inflammations. The connection by which they are maintained in their situation is entirely on their internal or concave face, where the pulmonary vessels and bronchia enter them.

"Each lobe of the lungs is divided into a great many distinct lobules, which are held together by intermediate cellular tissue. The marks of these divisions are apparent on the surface, by lines running in different directions; but they are made still more distinct by tearing them asunder." These lobules are again subdivided into very fine air-cells, which may be considered the terminations of the ultimate branches of the bronchia. Besides the ramifications of the bronchia, the substance of the lungs is composed of numerous blood-vessels and lymphatics, and is well supplied with nerves. The blood-vessels are of two kinds, the pulmonary and the bronchial. The bronchial commonly come off from the aorta, but sometimes from the superior intercostal. There is one, and occasionally two, to each lung. They enter with and follow the course of the bronchia, and are designed to supply nourishment to the lungs. Bleeding from the lungs probably often proceeds from these vessels. For some further account of the circulation in the lungs, see *Circulation*.

The lungs have no motion of themselves, but are kept in constant motion chiefly by the action of the diaphragm, and partly by the numerous muscles situated upon the chest and abdomen, called the respiratory muscles. Though these muscles are in some degree subject to the influence of the will, respiration is ordinarily an involuntary action, the Author of nature not having thought proper to commit the performance of so important a function to the option of the individual.

In a healthy condition, the lungs are of a light-pink color, spotted with dark-colored specks or patches, which become larger and more numerous as the person advances in age. After respiration has been established, the texture of the lungs is exceedingly light and spongy, and floats upon water like the lightest substances; but in the foetal state, or before they have been inflated by respiration, they are comparatively solid and heavy, and do not float upon water any better than other solid flesh.

In cases of suspected infanticide, or in cases in which it is desirable to know whether a child has ever breathed or not, the specific gravity of the lungs, compared with that of water, is considered the strongest evidence.

LUNG FEVER.—This term has been used somewhat differently by physicians, as well as by people generally, to mean almost any affection of the lungs attended with fever. To be informed

that a person has the lung fever conveys to the mind no definite idea of the nature of the case. It may be peripneumony, bronchitis, or influenza, all of which affect the lungs, and are often attended with more or less fever. In order, however, to give our readers as clear, and consequently as useful, views of the diseases of the organs contained in the cavity of the thorax as the nature of the subject will admit, the term will be here limited to mean an inflammation of the mucous or lining membrane of the bronchial tubes, and their innumerable branches in the lungs, attended with fever. By referring to the articles Pleurisy and Peripneumony, it will be seen that the former is an inflammation of the pleura, or membrane that envelopes the lungs and lines the cavity of the chest; the latter, an inflammation of the substance, or parenchyma, of the lungs; the lung fever is the same affection located upon the third and principal other structure of which these organs are constituted.

Perhaps this name is not the most appropriate that could be selected, but as it is the one by which the disease is generally designated, it is therefore the most suitable in a book of this kind. The general term, inflammation of the lungs, may mean lung fever as here defined, or an inflammation of any other part of the lungs. Bronchitis and influenza are affections of the mucous membrane of the bronchial tubes, and in this particular resemble lung fever; but these diseases are located and limited, in some measure, to the larger branches of the bronchia, and frequently exist with but a slight degree of fever; whereas the inflammation in lung fever may affect this membrane in its whole extent, and the fever is an essential characteristic. Lung fever, as here intended to be defined, is confined principally to infants and children under twelve years of age. When we consider that the calibre of the bronchial vessels in infancy is very small compared with the same parts in the adult, it will readily be perceived how much more liable they are to be obstructed by a thickening of the membrane, and by accumulated phlegm; and when we take into account the rapidity of the circulation, the irritability of the nervous system, and the consequent predisposition to febrile diseases in infancy, it will be perceived that the same causes which would produce great disturbance in the system of a child, would have but little effect upon that of an adult, in whom these circumstances are reversed. What would be an influenza or bronchitis in an adult might be lung fever in an infant. That these different affections of the lungs may, and frequently do, run into each other, is well known, and that there is often much difficulty in distinguishing them, must be admitted; but these are not sufficient reasons why we should not endeavor to obtain distinct notions of each in its uncomplicated form.

The most common, if not the only, causes of lung fever, are colds or influenza, in whatever way induced. Like other inflammations and fevers, this, probably, always begins with a greater or less degree of chilliness and shivering, debility, headache, pain

in the back, &c., though the patient is generally too young to make any complaint except by fretfulness and crying. The first symptoms which attract particular attention are, that the nostrils are obstructed, and that there are sneezing and a hacking cough. As the inflammation progresses downward into the windpipe, the cough frequently resembles that of croup, and, as there is difficulty of breathing, it is not unusual for parents to be very much alarmed, mistaking the case for that alarming disease. These peculiar symptoms soon change, and especially if an emetic be given, which is a common remedy in croup. The seat of the disease appears to be lower down in the chest than croup. The cough is short and frequent, and sounds as if some phlegm was raised at each time into the throat,—and this, generally speaking, is the fact; but as infants never spit out what they raise, it is immediately swallowed into the stomach, and passes off through the bowels. Parents are frequently alarmed because the child does not throw the phlegm off by the mouth, and at the quantity which passes the bowels, having the appearance of slime; but this alarm is uncalled for, as no harm comes from it. The lungs are cleared just as effectually as though it were spit out. The skin is hot and dry; the cheeks are flushed, or there are circumscribed spots upon one or both of them; the pulse is quick; the tongue coated; and if the fever run high and the lungs are much oppressed with phlegm, the child is often heavy and drowsy. Sometimes, however, it is sleepless and fretful. Should the inflammation extend to the substance of the lungs,—a case that frequently occurs,—there will be pain in some part of the chest, the breath will be short, and the cough suppressed. In those cases in which the child is too young to describe its feelings, the existence of pain may be known by its making a moaning noise when it draws in its breath. This symptom may be observed especially during sleep, as the breathing in this state is not shortened by an act of the will, as it is when awake.

Lung fever, when uncomplicated with inflammation of the parenchyma, is not ordinarily a very dangerous disease; though in young infants, in whom the vessels are very small, the thickened membrane and accumulated phlegm may so completely prevent the admission of air into the lungs that a kind of suffocation will take place, and death be the consequence. If the substance of the lungs be implicated, death may occur in the same manner as in peripneumony, or the disease may become chronic and terminate in consumption.

Lung fever generally runs about a week, at the end of which time a crisis is formed, as in other inflammatory affections; the sleep becomes quiet and natural; the respiration free and full; the skin moist and cool; the pulse slow and soft; the cough diminished in frequency, though there may still be occasional paroxysms of hard coughing; the expectoration easy and copious; and the appetite returns. Like other similar affections, this is more frequent in some seasons than others, sometimes prevailing epidemi-

cally. As it is mostly produced by cold, wet, and changeable weather, wet feet, &c., the spring and fall are consequently the seasons in which it is most prevalent.

Domestic Remedies.—In treating lung fever, it should be borne in mind that it is of an inflammatory nature, and consequently that the remedies employed must be antiphlogistic, or such as have a tendency to subdue inflammation.

All solid and stimulating food and drinks should be prohibited. The drinks should consist of gum-water, slippery-elm, flax-seed, balm or mullein tea, Indian meal or rice gruel, molasses and water, or lemonade. Warm drinks are preferable to cold, but cold water need not be entirely withheld. If the child nurse, it should be only in small quantities at a time, as digestion must necessarily be imperfect, and the stomach will be oppressed, and the complaint of the lungs aggravated. Bathing the extremities twice a day in hot water, and mustard poultices to the feet, are among the most valuable domestic remedies. They equalize the circulation, promote perspiration, and thereby lessen the quantity of blood at the seat of the disease, and therefore produce an effect equivalent to extracting blood from the system. Should the difficulty of breathing be great, hot stupes should be applied to the chest. In applying stupes, the water, or whatever is used for the bath, should be kept constantly hot, and two pieces of flannel, of suitable size, and of four or five thicknesses, should be used, so that when one is removed the other may be in readiness to apply immediately, in order to prevent the cold air from coming in contact with the warm, moist surface. The bathing ought to be continued until relief is obtained, which may require from two to ten or twelve hours, and the cloths changed as often as they begin to grow cold. If well covered with warm, dry flannel, the stupes will retain sufficient heat thirty minutes; but if this precaution be not taken, they will require to be changed every ten or fifteen minutes. We have described this process the more minutely in consequence of having seldom seen it conducted in a manner to be of the least possible benefit, and because, when not properly done, its effects are decidedly injurious. A gentle emetic of ipecac. or hive syrup should be given twice or thrice in twenty-four hours, according to the urgency of the case, and the bowels moved with castor-oil, if the emetics do not produce this effect. During the intervals between the emetics, small, nauseating doses of the hive syrup, ipecac., or antimonial wine, should be administered every two or three hours, to promote raising. The nitrate of potash, sal nitre, combined with the ipecac., or given by itself in solution, alternately with the nauseating medicines, is the best medicine with which we are acquainted for mitigating the fever in the first stage. In the second stage of the complaint, the sweet spirits of nitre is preferable to the sal nitre, and may be mixed with the hive syrup, or the wine of ipecac., or antimony. The syrup of squills and oil of almonds, with the addition of a little tincture of tolu, is an appropriate remedy, and, if the patient be very young or much debilitated, will be

preferable to the hive syrup, or any medicine containing antimony. Lard and other oils, warmed, with molasses, are common domestic remedies in lung affections of children, and are unobjectionable, and perhaps in some cases will prove valuable auxiliaries. While the skin continues hot and dry, the pulse quick and hard, the cheeks flushed, and the breathing laborious, these means may be persevered in with perfect safety; but if there should be a cold sweat, pale cheeks, slow and weak pulse, and other symptoms of prostration, they must be discontinued, for a while at least, and a little camphor or Hoffman's anodyne be given.

Professional Remedies.—The most potent remedy in the treatment of lung fever is bleeding; and in violent attacks, and particularly if the pain be severe, and there be reason to suppose that the substance of the lungs is involved, it should be resorted to, whatever the age of the patient. The earlier bleeding is practised, and the more decided the impression made upon the system at the first operation, the more beneficial will be the effects produced. If the patient be young, leeching the chest is the best mode of drawing blood. After the leeches drop off, the bleeding may be promoted by warm wet cloths, until an impression is made upon the system. In older children, a prompt bleeding from the arm is the most effectual mode of arresting the progress of the disease. Blistering the chest of young infants, though often practised, is of doubtful utility. The irritation it produces probably more than counterbalances its good effects. Blisters are by no means as safe, and but little more efficient than mustard poultices, and should be used with great caution. Calomel is often given, and is a medicine well worthy of a trial in dangerous cases, if other remedies do not control the disease; but an indiscriminate use of it, in all cases, should be deprecated. It is rare that the disease cannot be cured without it equally as well as with it. It sometimes happens that the cough continues after the fever has subsided, and when the patient is very much prostrated; in these cases camphor and other cordials may be given. A solution of sal ammoniac, liquorice, and ipecac., given as recommended in measles, and the lac ammoniac, are appropriate remedies, and an occasional dose of paregoric or Dover's powder is indispensable in some cases, after the fever has in a measure subsided. As the doses of the medicines recommended in this disease are all given under their respective heads, it is thought unnecessary to particularize them. In giving liquid medicine, however, to young children, we would observe that they should always be dropped from a phial, in order that the doses may be nicely graduated by the ability of the stomach to bear them. During convalescence, which is usually rapid, the diet should be light and nutritious, and all undue exposure to the weather avoided, or the cough may be protracted, and the disease terminate in a consumption.

LYMPHATIC VESSELS.—These vessels are distributed nearly over the whole body. They form a distinct system of vessels, and everywhere convey a fluid of the nature of water, or

serum. They are transparent, very thin, and cylindrical. Their office appears to be to take up and convey into the venous system all the solids and fluids of the body. It is by the agency of these vessels that the body is continually changed. The lacteals introduce new matter into the system; the lymphatics carry away the old. If water or pus is secreted in any of the cavities of the body, the lymphatic vessels absorb it, and convey it into the circulation. Every part of the old matter which will answer to make new blood is appropriated by these vessels to the renewal of the system. A network of them is seen traversing every part of the body, except the brain. They are supposed to exist in the brain, but hitherto they have escaped detection. As they proceed from the extremities, they form into little knots, called glands, and finally end in the thoracic duct. Some run near the surface, and others are deep-seated. They contain valves like veins, and are formed of an outer cellular membrane and an internal coat. Large tumors are often taken up and carried away by them. In many cases of dropsy the water is absorbed by the lymphatics, and the disease is cured.

M.

MACERATION.—This operation is the infusion of substances in either cold or hot water, in order to extract their virtues. The ingredients are thrown into water, where they are allowed to stand and soften until their essence is dissolved. To extract the virtues of plants and other substances, requires time, and much longer by cold than by hot water.

MAGNESIA.—Pure magnesia is one of the sub-alkalies. It is a white powder, of an alkaline taste, and possesses purgative and diuretic properties. The lump magnesia is a carbonate of the calcined or pure magnesia. The carbonic acid is expelled from the carbonate of magnesia by heat. The lump magnesia is put into a crucible and burnt like limestone in the kiln, by which process the pure or calcined magnesia is obtained. The calcined magnesia must be kept in closely-stopped glass vessels, on account of its disposition to absorb carbonic acid from the air, and to return to its state of carbonate again. Both the carbonate of magnesia and the calcined are laxative, and good correctors of acidity or sourness of the stomach. No substance neutralizes the acidities of the stomach so perfectly and safely as magnesia. The calcined is preferable, because it extricates no air or gas. The lump magnesia is chiefly used as an absorbent. The dose of calcined magnesia is from a tea-spoonful to a table-spoonful, mixed with milk or water. It is one of the safest, best, and surest cathartics which we possess. In nervous affections, such as hysterics, hypochondrism, insanity, and epilepsy, the calcined magnesia will be found espe-

cially serviceable, as it operates both upon the kidneys and bowels. It is a peculiarly suitable medicine for children, which are continually more or less troubled with acidities. In dropsies, if used properly, it is a medicine of uncommon efficacy.

MALIGNANT SORE THROAT—Scarlet Fever.—See *Scarlet Fever*.

MANIA—Insanity, Craziness.—See *Insanity*.

MANNA—Fraxinus Ornus.—The tree which affords manna grows in Calabria and Sicily. In the warm season of the year, a clear juice exudes from the stem and branches of this tree, which, when concentered or thickened by the sun, is the real manna that we see in shops in the form of oblong, yellowish, friable flakes. It has a sweet taste, resembling maple sugar, a greasy feel, and easily dissolves in warm water.

Manna is a mild laxative, peculiarly suitable to young children. The dose for children is from one to three drachms, according to their age; the dose for an adult, an ounce or an ounce and a half. Mixed with liquorice-stick and senna, and steeped in water, it makes a good medicine for a cough. Where it is often given, the dose must be very much increased.

MARASMUS.—A wasting of the flesh without fever. See *Tubes*.

MARIGOLD—Calendula Officinalis.—The flowers, leaves, and branches of the young plant have been highly extolled in the case of cancers of the breast. After washing the cancer with a tea of the plant, the expressed juice, made into an ointment with fresh butter, is to be applied once or twice a day, by means of lint. One or two ounces of the tea is at the same time to be drank. The taste is bitter and somewhat pungent. A dose of the extract is from four to sixteen grains. In this form, it has been given with success in cases of scirrhus of the stomach.

MARSH ROSEMARY.—This plant grows in salt marshes. The flowers are blue, and grow on long spikes on the tops of the branches. The stem is naked, branched, and about a foot high. The roots of this plant are highly astringent. In the sore mouth or canker, a tea made of the roots, and used as a gargle every few minutes in the course of the day, with now and then a swallow of it taken into the stomach, has often proved a cure. It is sometimes used to cure the dysentery and diarrhœa. The celebrated Dr. Hews, of this place, was in the habit of giving it as a substitute for the Peruvian bark.

MASTICATION.—The division of the food by the teeth, and its mixture with the saliva and mucus of the mouth. The solvent power of the saliva is very great. Most of the alimentary substances taken into the mouth are wholly or partially dissolved by this fluid before they reach the stomach. If the mucus and saliva of the mouth are absent, there is no appetite, and the digestion of the food is very difficult. Mastication is the first step towards the animalization of lifeless matter, or the food. It is broken down, comminuted, and more or less dissolved in the

mouth, and prepared to undergo another animal process in the stomach. The action of the jaws, cheeks, lips, and tongue, are all necessary in the dissolution of the food in the mouth. The tongue itself is one of the chief agents, not only in swallowing, but in moving the food about the mouth, and mixing it with the saliva. Even the sight and smell of food excite the secretions of the mouth. There are six salivary glands; three situated on each side of the mouth, each of which pours forth the saliva by means of a small duct, or canal.

MAY APPLE—*Mandrake*—*Podophyllum Peltatum*.—The root of this plant operates as a sure and active cathartic. It grows in low, shady places in all parts of the country. The stem rises to about a foot in height, the leaf is palmate, and the plant bears a solitary flower, and a yellowish-colored fruit of the size of the common plum. The root is used in the form of fine powder, in the dose of twenty grains. It should be dug in the fall and dried carefully. Some physicians have used it as a substitute for jalap, aloes, and rhubarb. It is unquestionably a valuable native plant, and its properties should be accurately and extensively tested. The leaves are said to be poisonous, and the whole plant to be narcotic. The powder can be taken in molasses or jelly.

MEASLES—*Rubeola*.—Measles is a catarrhal, eruptive fever of a peculiar character and limited duration, which affects the same individual but once. The principal locations of this disease are the lungs and the skin; hence, it is always attended with a cough and an eruption. The most common cause of measles is contagion, but it sometimes attacks those who have not been exposed to it, and, consequently, must be produced by some atmospheric influences, or terrestrial emanations, the nature of which is not known. The matter of contagion, or miasm, remains latent, though probably not inactive, in the system, from nine to fourteen days after exposure, before the disease is sufficiently developed to manifest itself. Measles makes its attacks very much in the same manner as a common cold. There is a harsh, dry cough, often somewhat like that of croup; hoarseness, and difficult respiration; the eyes are inflamed and the lids tumefied; there is a constant flow of acrid tears, and the secretion from the lining membrane of the nostrils is so irritating that almost perpetual sneezing is sometimes produced; the head aches, the patient is drowsy, and the stomach often rejects its contents; the tongue is coated, the pulse quickened, and other symptoms of general fever are present. The rash usually appears on the fourth day, in irregularly grouped crimson dots, which are slightly elevated. By examining the mouth, red spots may be seen upon the roof before they appear upon the skin. They next appear on the head and face, and in the course of two days extend over the whole body and limbs, entirely to the hands and feet. In the course of the next twenty-four hours they run together, beginning at the head, and the disease comes to a crisis. At this period, by a close examination, a fine scurfy appearance of the

skin may be observed, occasioned by minute portions of cuticle or scarfskin, which are cast off from the vesicles that form in the course of the eruption. While the rash is coming out, and until the crisis is formed, the cough and all the other symptoms are aggravated, and it is not unusual for the patient to pass two or three uncomfortable and restless days and nights; when, however, the disease is unattended by any unusual complication, or violent inflammation of the lungs, almost immediate relief is experienced at the crisis, and the recovery is frequently very rapid. Measles may be distinguished from scarlet fever, by the eruption not appearing until the fourth, instead of the second day; by the presence of cough and other catarrhal symptoms; by the dots appearing first on the head, being grouped and of a crimson rather than a scarlet color. The pulse, generally speaking, is not as frequent as in scarlet fever, nor is the intensity of the fever as great. When properly managed, measles cannot be considered as a dangerous disease. In those cases which do prove fatal, the inflammation, which is ordinarily confined to the mucous or lining membrane, extends to the substance of the lungs, and dissolution takes place in the same manner as in peripneumony, or the disease degenerates into a quick consumption, which may prove fatal after weeks or months. Spring and fall are the seasons in which measles is the most frequently prevalent, though it may occur in any season, or in any kind of weather. Changeable, cold, and damp weather, however, undoubtedly aggravates its character, and predisposes to dangerous inflammations.

Those who, from exposure to the contagion, are liable to have this disease, should be warmly clad, and should avoid all undue exposure to cold and wet weather. The feet, in particular, should be kept warm and dry. During the first stage of the complaint the symptoms may be mitigated by bathing the feet once or twice a day in hot water, and by a free use of warm demulcent and sweating drinks. Molasses and water, balm, mullein, flax-seed and slippery-elm, are some of the most appropriate. Should the rash not appear in due season, a strong mustard bath, followed by mustard or some other stimulating poultices to the feet, and warm vinegar whey, saffron, summer-savory, or pennyroyal tea, in copious draughts, should be tried. If there be much difficulty of breathing, with a sense of oppression at the stomach, the application of a strong mustard poultice to the chest will sometimes be followed with the happiest effects.

These means, with the addition of a dose of castor-oil, or some other gentle physic, soon after the crisis, are all that are necessary in ordinary cases; we, however, occasionally meet with cases in which the eruption seems to be detained by excessive fever. In these the greatest benefit will often be derived from moderate bleeding, an emetic or cathartic, and nauseating doses of antimony, ipecac., or hive-syrup. It is a popular opinion that cathartics are injurious and unsafe before the crisis; for this opinion, however, there is no well-founded reason. It is true, indeed, that

these medicines are not often necessary, but should circumstances require them, they may be given with perfect safety. If in any stage of the disease there should be fixed pain in any part of the chest, aggravated by coughing or taking a full breath, there will be reason to apprehend inflammation of the lungs, and the case must be treated accordingly, by bleeding either with the lancet or leeches, hot poultices or stupes to the chest, nauseating doses of ipecac., antimony, hive syrup, or lobelia, and nitrate of potash, repeated every three or four hours; demulcent drinks, such as flax-seed tea, gum-water, or mucilage of slippery-elm; and, if relief be not obtained, by blistering over the seat of the pain. Should the cough and expectoration, attended with soreness and dull pain in the chest, continue after the active stage of the disease has passed, the sal ammoniac, — muriate ammon, — combined with extract of liquorice and ipecac., will be found one of the best medicines, and often produces the most salutary effects. One drachm of sal ammoniac, three of liquorice, and ten grains of ipecac., should be dissolved in half a pint of boiling water, of which, a tea-spoonful is a dose for a child two years old, and a table-spoonful for an adult, to be repeated every four hours. Under these circumstances, quieting doses of paregoric, or some other preparation of opium, may also be given with advantage, especially at night. As the eyes are always more or less inflamed in measles, the room should be darkened, and the eyes frequently bathed in cold rain-water, milk and water, or green tea. If, however, the inflammation be severe, and these means are not sufficient to subdue it, the case must be treated in the same manner as when occurring under other circumstances, and the reader is referred to the article upon that subject.

Before concluding this article, it may be proper to observe, that cases of measles are occasionally met with, assuming a very different character from that above described. The cases referred to, generally occur in debilitated or broken-down constitutions, or under circumstances calculated to enfeeble the vital functions, and, consequently, interrupt the natural course of the disease. The rash, instead of appearing on the fourth day, is delayed until the seventh, and is intermixed with spots of a dark or livid hue, resembling those of spotted or petechial fever, which often remain ten or twelve days. There is but little fever; the pulse is small and frequent, indicating great debility, and the patient is extremely languid. This form of the disease partakes of the typhoid rather than the inflammatory character, and must be treated accordingly. All reducing means and medicines are contra-indicated. The system must be supported with nourishing drinks, and its energies aroused by tonics and stimulants. One of the best tonics is the quinine dissolved in water, acidulated with sulphuric acid; and, as stimulants, wine whey, camphor and ammonia, are the most appropriate. Expectoration should be promoted with a decoction of seneca-root, lac ammoniac, and squills. N. B. By referring to

the article Lung Fever, some observations will be found which apply equally well to measles.

MEATPIPE. — This pipe or canal, which conveys the food and drink into the stomach, is composed of the pharynx and œsophagus; or, in other words, what, in anatomical language, are called pharynx and œsophagus form the meatpipe. This channel is everywhere studded with little mucous glands, which, during the mastication of the food, pour forth an abundance of a ropy juice, which moistens and lubricates the passage.

MECONIUM. — The green, bile-like looking matter which is found in the bowels of children before birth, and which is discharged soon after.

MEDIASTINUM. — The membranous partition which separates the cavity of the chest into two chambers. It is formed by a duplicature of the membrane which lines the internal surface of the chest, and which is called the pleura. By an examination of the chest of domestic animals, a good idea may be formed of this partition in man.

MEDULLARY SUBSTANCE. — The spinal marrow, and the white substance of the brain.

MELANCHOLY. — A species of insanity characterized by despondency, gloomy ideas, excessive timidity, costiveness of the bowels, inactivity, silence, and suspicion. See *Insanity*.

MEMBRANE. — The membranes are broad, thin sheets of elastic fibres, woven strongly together, which exhale either a mucous or a watery matter. The skin is the largest and most extensive membrane in the system. Another covers all the muscles, and is called the cellular membrane, being formed with innumerable little cells, in which the fat is contained. Another membrane covers all the bones, and is called the periosteum. This, when raised from the bones, is thin, transparent, and looks like a sheet of isinglass. The mouth, throat, windpipe, and lungs, are all covered with a mucous membrane. The inner surface of the bowels is also lined with a mucous membrane. The cavities of the belly and chest are lined with serous membranes, or membranes which secrete and exhale a watery fluid. The brain is covered, and all its cavities lined, with a serous membrane. A proper knowledge of the membranes, and the part which they act in the system, should be an important study with every well-bred physician.

MENORRHAGIA. — Bleeding from the womb.

MENSES. — Monthly sickness of females. See *Monthly Sickness*.

MERCURY. — Quicksilver, and its several preparations, such as calomel, corrosive sublimate, red precipitate, blue pill, iodide, and Ethiops mineral. It is found in the earth in the state of an oxide or rust, like iron ore. It is sometimes found united with silver, and, at others, with sulphur. It is the only metal which exists in a fluid state. It will, however, become solid in a temperature forty degrees below zero. It is thirteen times heavier than water. It combines with most of the acids, with sulphur,

and with many of the metals. Both in the arts and in medicine, it is an invaluable mineral.

MERCURIAL OINTMENT — Blue Ointment. — This ointment is made of one part of quicksilver, one of hog's lard, and one of mutton suet. The mercury must be carefully rubbed in a mortar with a little hog's lard, until the globules entirely disappear; then add the rest of the lard and suet gradually, rubbing them all the while well together. This ointment is used in a great variety of diseases. Mercury in this form can be easily introduced into the system, and has all the effect as if taken by the mouth. Rubbed anywhere upon the skin, it is taken up by the absorbents and diffused over the whole system. The inside of the thighs and legs absorb it the most readily and innocently. The mercurial ointment is often used to discuss or scatter indolent swellings and hardened parts. Where a bubo arises in the groin, it is customary to rub into the thigh, just below it, a small mass of the ointment, every day. The quantity used at a time should be in bulk about the size of a filbert. It is often used in diseases of the skin, such as the itch, and the venereal eruption. Old sores and ulcers may be cured with it. Some physicians use the mercurial ointment in fevers, where a sore mouth is to be apprehended from an internal administration of it.

MESENTERY. — This is the thick sheet of membrane to which the bowels adhere. It is spread out from the vertebræ of the back something in the shape of a fan, to the edge of which the bowels are attached. It is formed by several folds of the peritoneum, interwoven together. It is traversed by a great number of lymphatics and lacteals, and allows motion to the bowels while it retains them in their proper position. It is a serous membrane, or rather a layer of serous membranes.

MEZEREON — Spurge Laurel — *Daphne Mezereum*. — This is a native plant, which grows in woods and shady places. The fruit is a berry containing but one seed. In a wild state, it is a low shrub, but, cultivated in gardens, grows to the height of sixteen feet. Every part of it is exceedingly corrosive. On this account it is a valuable escharotic, and being of the vegetable class, is well adapted to popular use. The bark of the root is the part used in medicine. Its taste is extremely acrid, and excites a burning sensation in the mouth and throat, which can hardly be borne. Applied to the skin in its fresh state, it raises a blister, and may be employed to keep up a continual discharge. A plant so active and corrosive in its nature promises some efficacy in the cure of cancer. It has been chiefly employed in the cure of cutaneous, venereal, and rheumatic diseases. In the cure of skin diseases it enjoys a high reputation, and deserves peculiar attention, as there are but few remedies yet found for them.

The bark of the root is used in the form of decoction or tea, made by boiling two drachms with half an ounce of liquorice root, in three pints of water, until it is reduced to two pints. Of this tea, a gill, or a gill and a half, may be taken four times a day.

The mezereon or spurge laurel is an active diaphoretic or sweating medicine. Its action upon the pores of the skin appears to constitute its value in cutaneous diseases. It is said to be particularly efficacious in healing venereal ulcers, and in removing nodes.

MIASM.—The poisonous effluvia, gas, air, or vapor which arises from putrid marshes, lakes, ponds, and stagnant waters of any description, and from putrid and malignant diseases.

MIDWIFERY.—The design of this article is not to enter minutely into the details of the obstetric art, or to teach an inexperienced person to conduct a difficult case of midwifery through its different stages, without further instruction, but to impart such information as will enable a woman of good understanding, and some observation, to manage an ordinary case of labor without the aid of a physician. To teach the art of midwifery in all its branches is not in accordance with the design of this work, nor would it be possible to condense it within the limits of the space that can be allotted to this subject. It frequently happens, however, particularly in the country, that the services of a physician, or a professed midwife, cannot be obtained in season to render the assistance necessary on these trying and emergent occasions. Under these circumstances it is believed that the directions here given, in addition to what is said upon the subjects of miscarriage, after-birth, and pregnancy, will prove a sufficient guide. It fortunately happens, that, in those cases which terminate quickly, but little assistance is necessary; whereas those that are more difficult are more lingering, and there is ample time to procure a physician. Considering the great number of accidents and untoward circumstances that are liable to occur during the course of, or immediately after, a labor, we sincerely believe we should be doing our readers an injury to induce them to dispense with the services of a physician who has a scientific knowledge of his profession, when they can be obtained. To know that a competent and careful accoucheur is at hand, ready to meet all the exigencies of the case, gives a woman confidence, relieves her from much anxiety, and thereby enhances her chance of going through her confinement safely.

When a woman is expecting to be confined, the choice and arrangement of her room are important considerations. This should be large, and as airy and retired as circumstances will admit, and through eight or nine of the colder months of the year should have conveniences for keeping a fire. Even when the weather is not very cold it is often necessary to have a little fire in the morning and evening, and chilly, damp days, which are liable to occur at almost every season of the year. A bed of straw, husks, or, what is preferable to all others, a hair mattress, is decidedly more comfortable and healthful than a feather bed. Feathers retain the heat and perspirable matter, which, besides rendering the patient uncomfortable, debilitate the system and predispose to disease, and they are, therefore, particularly objec-

tionable during the warm seasons. The bed, if possible, should be so situated as to avoid a direct draught of air upon it from a door or window, and the air should be so admitted that the room may be ventilated without blowing directly upon the patient. The bed-clothes and garments intended for the use of the woman should be well dried, and if the weather be cold, warmed, and so made and in such readiness that there will be no delay when they may be needed, or difficulty in changing them. The bed should be well protected, and so arranged that everything that is wet or soiled can be removed, to avoid the disagreeable and unwholesome effluvia that would otherwise arise during the woman's confinement in a warm and perhaps close apartment.

Labor usually takes place about the end of the ninth calendar month or the thirty-ninth week of pregnancy, which ordinarily varies but little from four and a half months after quickening, or the first perceptible motion of the fœtus. It is not unusual for a woman to be troubled with irregular pains, more or less severe, for a number of days, or even several weeks, previous to her labor, which, from their not producing any effect towards expelling the fœtus, are called false pains. These pains are usually most troublesome during the night, and may be entirely absent during the day. They are often sharp and tedious to bear, but they come on at irregular intervals, and do not bear down like efficient and expulsive contractions of the womb, nor are they attended with a discharge from the vagina, as is usually the case in real labor. When the pains are suspected to be false, an attempt ought to be made to relieve them by warm sudorific and anodyne drinks, such as hop, poppy, sage, or summer-savory tea, camphor and hot water; or, if these do not succeed, two tea-spoonfuls of paregoric, or thirty drops of laudanum, may be given, and repeated every three or four hours if necessary. No danger need be apprehended from giving an anodyne, for if the labor be actually beginning it will often have a happy effect in regulating the pains and facilitating the labor.

When the pains come on at regular intervals, gradually increase in severity, are attended with a bearing-down sensation, a looseness of the bowels, frequent inclination to make water, and a slight discharge, or a moisture of the organs of generation, it will be presumable that true labor has begun, however slow or feeble they may be at the commencement. The discharge which is called a "show" is often colored, and sometimes there is an appearance of fresh blood. Should the case prove tedious, the pains inefficient and irregular, bathing the feet in hot water, and the administration of warm summer-savory or tansy tea, will often be followed by beneficial effects, the pains becoming more regular and efficient, and at the same time perhaps not more distressing. A dose of castor-oil, or an injection of salt and water, by evacuating the lower portion of the bowels, contributes materially to the ease and advancement of the process, and ought never to be neglected when the bowels are not free. When it is desirable to

increase the force of the pains, drinking freely of cold water often produces a good effect, and may be taken with perfect safety. The ergot, or spurred rye, is sometimes administered for this purpose, but is an unsafe medicine except in cases of a peculiar kind, and should not be given without the advice of a physician, as it will endanger the life of the child, if not that of the woman.

The location of the pains is very different in different cases, though the common situation, in the first stage of the labor, is in the lower part of the abdomen, and extending round into the back and hips, and in the last stage, they are usually confined to the lower part of the back, which may be considered as the most favorable. When the pains continue hard in the lower part of the abdomen, in the region of the pubic-bones, for a long time, there will be reason to fear that the case may prove to be what is called a face presentation, or that some part of the child rests upon these bones in such a manner that it cannot readily descend into the pelvis.

It is not uncommon for the women in attendance to urge the sick woman to bear to the pains,—to use the language employed on these occasions,—and this is undoubtedly proper to a certain extent. When the efforts of nature are inefficient, and the woman discouraged or inexperienced, by encouraging her in this manner, some additional force may be given to the pains, and the labor go on the more rapidly; but when the labor is progressing naturally, and especially in the last stage, this practice is uncalled for, and is liable to cause injuries that might not otherwise have been sustained. The more slowly and carefully the last stage of the process is accomplished, the less danger will there be of the woman being injured, and of accidents, such as difficulties with the placenta or after-birth, and flooding after the birth of the child. It is frequently necessary to retard in some measure the exit of the child, and prevent it from suddenly passing through the external parts, by the pressure of the palm of the left hand upon the perineum, after it begins to be distended by the head, directing the pressure in such a manner as to give it an inclination forward under the bone. Neither should the shoulders be too much hastened through, but allowed to remain until the pains return. When the head and shoulders come through, they should be supported, inclined a little forward in reference to the mother, and not prevented from taking the natural turn, which will, when the hips are expelled, bring the child upon its back or side. Should, however, the child be large, or expulsive pains not come on in a few minutes, its life will be endangered, and an attempt must be made to bring one shoulder down in the direction it is found to move most easily, by the fore-finger passed into the arm-pit. While the labor is progressing, and when there is no reason to suppose that it is upon the point of being finished, the woman should be permitted to sit up in a chair, to walk about, and to put herself into any position she may prefer. To confine her to any particular position, or to the bed, is quite unnecessary, and is very

tiresome. Lying in bed, upon the back, with the head and shoulders raised, is a natural and comfortable position, but lying upon the left side is generally preferred by physicians, being natural and easy, and the most convenient when it is necessary to examine the patient, or to render any assistance. When the right kind of pains come on, it is natural to draw the head forward and to pull downward with the arms, but if the woman be not inclined to do this, there is no propriety in urging it.

After the child is expelled, if it should not cry immediately, or breathe freely, it should be chafed upon the stomach with a flannel cloth, a little cold water, vinegar, or spirits be sprinkled upon it, and occasionally a sudden gust of air blown upon it with the mouth or a fan. These means, if the child be alive, will generally revive it, and the breathing will be established; but should it remain apparently lifeless for some minutes, it ought to be placed in a warm bath and rubbed, and the lungs be inflated by putting a quill or pipe-stem into one nostril, and then closing the nose and mouth so as to prevent the escape of the air through them, and blowing gently until the lungs are filled. When the lungs are filled, the mouth and nose should be unclosed, and the air forced out by gentle pressure upon the chest and abdomen. This process may be repeated several times, and the motion of breathing be imitated by the pressure of the hand upon the abdomen, giving it a rising and falling motion. By these means, children that are apparently dead will sometimes be resuscitated. A beating of the navel-string is a sure sign that the child is alive, and the absence of the beating, before the child has breathed, is strong evidence that it is dead; no means, however, should be left untried to resuscitate it, for if it be very feeble, an inexperienced person may be deceived in regard to the pulsation of the chord, and no harm can arise from trying to the full extent such means as would be likely to rekindle the latent spark into life. Too much haste in tying the navel-string should be avoided. The child should have time to establish fairly the new mode of life before that by which it previously existed is cut off. It may, and ought, in many cases, to remain ten or fifteen minutes, or until the chord ceases to beat, before its connection with the mother is severed. If separated too soon its chance of life is diminished. In tying the navel-string, a firm strong string, about as large as a knitting-needle, made of thread, and twisted, should be used. Tape is not very suitable, and a string that is too fine is liable, when tied firmly, to cut the vessels and endanger bleeding. It is necessary, particularly if the navel-string be large, to tie it very firmly, as the child may otherwise lose its life by the loss of blood, a circumstance that has frequently occurred within our knowledge. An examination of the child should always be made, if it be laid by for a time before it is dressed, as is often done, to ascertain whether it bleed or not at the divided end of the chord, and another string be tied around it if it be found insecure. It is not a matter of much importance as to the place where the navel-string is tied or divided,

but about three fingers' breadth from the belly of the child is the place usually chosen. This leaves it long enough to tie again, should it be required, is convenient to dress, and not so long as to be in the way, or generate much smell while sloughing. The child being taken away, the after-birth should next be attended to. In a large proportion of cases this will come away spontaneously in the course of ten or twenty minutes after the birth of the child. It will be proper, however, to take hold of the cord and carefully ascertain if the placenta can be felt in the passage, and whether the woman is losing more blood than is natural at such a time. If the placenta can be felt in the passage no great danger need be apprehended, as a few pains, a little gentle motion, and very moderate extension of the cord, will deliver it safely. When it remains high up in the abdomen, however, and especially if there be an unusual loss of blood, the action of the womb must be promoted by pressure and kneading the lower part of the bowels, by grasping and squeezing the womb gently in the hand, at the same time pulling very moderately and moving the cord, so as to make the extension in different directions. Great care is necessary in these cases not to pull so hard as to break or to separate the cord from the placenta, nor to bring down the womb, the latter of which accidents would be fatal, and the former, to say the least of it, very troublesome. In cases of excessive flooding, whether the after-birth has come away or not, the woman should be placed upon her back, with her head and shoulders low, be kept perfectly still, and cold vinegar, spirits, or water, applied freely to the lower part of the bowels and pudenda, by means of cotton or linen cloths, which should be changed every few minutes, until the flooding is arrested. If, under these circumstances, the after-birth be retained in the womb, the most skilful assistance ought immediately to be obtained, as the woman will be in imminent danger until this is delivered.

The drinks should be cold water, toast-water or tea, the room cool, and the air be freely admitted. Should there be extreme faintness, a little camphor, or a few drops of spirits of hartshorn, may be administered in cold water.

If the pains are severe after the placenta has come away, thirty or forty drops of laudanum or two tea-spoonfuls of paregoric, or some other anodyne, may be given. No attempt should be made to move the patient or change her clothes until the flooding has abated, and she has revived from the faintness. In changing the woman's clothes and putting her into bed, whether there have been flooding or not, the greatest caution should be observed that she do not exert herself so as to cause too great a loss of blood. She ought by no means to be permitted to walk, or even stand upon her feet, without being supported. During the first two or three days after delivery, the patient should be kept perfectly quiet, should see but little company, and be restricted to a plain, unstimulating diet. The most appropriate articles of diet are gruel, rice, soda crackers, dry toast, and weak tea; no flesh, fowl or fish is necessary, nor should be allowed

during the first week, and even after this time the quantity should be very small, and consist of those kinds that are the easiest of digestion. If the lochia or discharge that follows delivery be scanty, mustard draughts must be applied to the feet, and an infusion of hops, tansy, or mugwort, be given in copious quantities, and the bowels be moved with castor-oil or some other *gentle* cathartic. To give oil the third day is a good general rule, but if the bowels move spontaneously and the woman be comfortable, it will be unnecessary. The free use of laxative drinks and food, such as infusion of elder flowers and mullein, tamarind-water, rye pudding, and a moderate use of figs, will often supersede the necessity of giving cathartics, and, perhaps, is quite as proper, and more agreeable to some stomachs. Should the bowels be very sore or painful, spirits of camphor, alcohol, or a liniment prepared by adding of gum camphor and oil of origanum, each one ounce, to seven ounces of alcohol, should be applied to them upon a flannel cloth. An ounce of gum camphor dissolved in half a pint of sweet oil also makes a very good liniment for these cases, as well as for the breasts when they are distended and painful. For the after-pains, poppy, hop, and lettuce tea, camphor, and the extract of lettuce, are suitable remedies; but, when there is no special objection to it, opium in some of its forms will be found to afford more relief than other medicine. Anodyne balsam, the active ingredients of which are opium and camphor, is one of the best preparations. A pill of three grains of this may be given every four hours until the pains are mitigated. Thirty or forty drops of laudanum, two tea-spoonfuls of paregoric, or an equivalent dose of morphine, may be given in the same manner, if preferred or more convenient.

The milk generally comes on the third or fourth day, but it may come the second, or be delayed till the fifth. At this time it is usual to have some degree of fever. There may be chills, headache, hot skin, thirst, and flushed countenance. The lochia is often suspended for twelve or twenty-four hours, when the milk comes, but returns when this secretion is established. The breasts, should they become hard, must be softened by the persevering application of lard, or some oily liniment, by means of gently rubbing them with the hands, and by the application of flannel cloths squeezed out of the lard as hot as it can be borne. We have seldom seen any serious trouble with the breasts when this practice has been followed, and they have been properly drawn with the mouth or a suitable instrument. It is rare that all the milk can be drawn out by the child during the first week or ten days.

An error productive of much suffering is frequently committed in attempting to force out the milk, when the breasts are hard and caked, sore and painful, before they are softened by rubbing them with warm oils, as heretofore described, or with fomentations with hot vinegar or poultices. They ought not, in the first place, to be allowed to get very full and hard, but when they are so, it is worse than vain to attempt to force out the milk with the breast-pump or pipe, until they are softened. The pump is a valuable instrument

for drawing the milk, when judiciously used, but it is too powerful in the hands of those who are not properly instructed in the manner of using it.

When a woman has had a labor of only ordinary severity, and is doing well, she should be taken out of bed every day after the second, and after a few days be allowed to sit awhile in a chair twice a day, particularly in warm weather, that her bedding may be changed and her bed aired and adjusted. This practice adds much to her comfort and contributes to her regaining strength. It may not be proper for her to stand or walk much the first week or ten days, but the too common practice of confining a woman to her bed two or three weeks is unnatural and unnecessary. It debilitates her system and retards her recovery. Those who perfectly recover in the shortest time are those who, whether from necessity or choice, soonest leave their beds. There are, it is true, exceptions to all general rules: there are some women who cannot do without injury what others are benefited by doing. We believe, however, that there is less difference in their natural physical ability, in this particular at least, than in their acquired habits, or, in other words, the constitutions which they themselves form and the circumstances with which they are surrounded.

Those women who take much exercise and accustom themselves to the air, and whose habits of eating and sleeping are regulated by the requirements of nature, are better fitted for becoming mothers, and rearing a healthy offspring, than the indolent and inactive, and those whose habits are irregular and unnatural.

During the first month the diet of the patient should be well regulated; it should be very plain and unstimulating, but may be nutritious, after the secretion of milk is established, in order to furnish a sufficiency of wholesome nutriment for the infant. Her clothing should be warm, her feet well protected from the cold and dampness, her exercise light, and her mind undisturbed by care or company.

In regard to the utility of swathing the bowels immediately after delivery, there is some diversity of opinion, and the practice is far from being uniform. By some it is thought to improve the form, by others to strengthen the bowels, while others practise it without a reason, except that it is the custom of their friends or their countrywomen. If the woman have been very large, the bowels very much distended,—if there have been an unusual loss of blood, attended with faintness, and a sensation of sinking and relaxation,—a moderately tight and well adjusted swathe is very proper, and undoubtedly beneficial, and under these circumstances ought to be applied and worn a few days. Our own observations have led us to doubt that a swathe improves the form enough to compensate for the trouble and inconvenience of wearing it. A bandage around the bowels, sufficiently tight to make any impression upon the form of the body, must interfere more or less with respiration, by preventing a free and easy descent of the diaphragm, and by limiting the action of the respiratory muscles; and, by compressing the stomach

and bowels, interrupt, in some measure, digestion and the healthy motion of the intestines. The tendency of a tight swathe, as commonly applied, must be to press the womb down, rather than to prevent a falling of that organ, as it is by some supposed to do. Upon the whole, we are inclined to the opinion that it is generally unnecessary, and may as well be omitted, but that it may occasionally be useful in the particular cases heretofore described.

It may seem almost superfluous to allude to the use of ardent spirits in childbed; but as the custom is not yet entirely obsolete, a few remarks upon the subject are deemed requisite. Ardent spirits are not unfrequently given by the women in attendance during labor, with the mistaken view of hastening the process. Under these circumstances, alcohol, in whatever form it may be given, acts very much like opium. There is a small proportion of cases in which it may regulate the pains and facilitate the dilatation of the mouth of the womb, and thereby hasten the labor; but in the great majority of cases it is not only unnecessary but injurious. If given in those cases not requiring an anodyne medicine, or given in such quantities as to put the system under its full influence, it diminishes the force of the contractions of the womb, and very much retards the labor. It has also the effect of preventing a return of the pains after the birth of the child, which are necessary for the expulsion of the after-birth. We have been called to cases where the after-birth had been retained many hours from this cause. There are women whom it makes nervous and hysterical, and thus deranges the natural operations; it produces a feverish excitement and a tendency to inflammation, which are always to be dreaded in childbed. As a remedy for after-pains, it is sometimes admissible, when opium is known to disagree with the patient, and the simpler remedies are insufficient; but it should always be given with caution, lest by giving too much, or repeating it too often, more serious troubles be induced than those it was intended to relieve. Considering the subject in all its bearings, we are more inclined to recommend the use of opium without the advice of a physician than that of ardent spirits. Wine and strong beer, in this climate at least, are still more objectionable than rum or gin; they cause a determination of blood to the head, inflammation and fever, and sometimes delirium. In extremely debilitated persons, a little wine, given at regular intervals, may be necessary as a tonic, but ought only to be given under the supervision of a competent adviser.

The pains and sufferings inseparably connected with parturition are often great and protracted, and the mother and friends look forward to the birth of a child with mingled hopes and fears; but when the trial comes, the fortitude and resignation with which these sufferings and dangers are braved by the most delicate females, have ever called forth the wonder and admiration of the harder sex. That women generally endure pain and sickness with more fortitude and patience than men, is a well established fact, corroborated by their willingness to endure the pains of parturition for the sake of offspring and their husbands. Few men, we believe,

could be induced, for any consideration, to suffer in a similar manner; but nature has fitted everything to its condition. The anxiously-expecting female, however, is not without her consolations. She is fulfilling the imperative requirements of nature; and the approving regards of a fond husband, and the pleasing hope of being the mother of a tender offspring, upon whom she can lavish her affections, buoy up her spirits, and sustain her in the hour of suffering. Besides, women are aware of the fact, that, whatever the sufferings may be, the comparative number of deaths in childbed is infinitely small, and they generally reason correctly, that their chance of going through safely amounts almost to a certainty. In the present improved state of the obstetric art, too, almost every variety of accident and disease is susceptible of being remedied by the skill of the physician. The parturient condition itself, when uncomplicated, is a natural one, from which the system soon rallies and regains its wonted energies, and differs materially from a state of disease, the tendency of which is to produce decay and destroy life.

The diseases to which women are liable in childbed, that are the most alarming, and which require the most prompt and energetic treatment, after the danger of flooding has passed, are inflammations of the womb, bowels, and bladder, milk delirium or mania lactea, childbed or puerperal fever, and those disorders of the stomach and bowels produced by eating improper food. Milk fever and inflammations of the breasts are unattended with danger, but require suitable remedies. Childbed swelled leg,—phlegmasia dolens,—is a severe and rare disease, but, under proper management, seldom, if ever, proves fatal. For a description of these diseases, we refer the reader to the different articles respectively.

The management of a new-born infant, though a matter of considerable importance, is so well understood by the women usually called upon on these occasions, that any very lengthy directions seem to be uncalled for; a few brief observations upon this subject, however, may not be inappropriate in this place.

The propriety of wrapping the child in a warm, dry flannel, or other soft cloth, as soon as it is removed from the mother, must be obvious to every one, as it cannot be otherwise than very sensitive to the cold, and liable to take cold. No harm can come from its remaining a short time before it is washed, though, if it be strong and apparently healthy, this office may be performed as soon as is convenient. Great pains should be taken that it be washed clean, especially about the eyes, under the arms, and in the groins; and if it be thickly covered with the white unctuous matter, which is often very difficult to remove, the process will be facilitated by rubbing it thoroughly with fresh lard or sweet oil before the washing is commenced. The soap used should be mild, and the water soft and moderately warm. The child should be as little exposed to the air, after being washed, before it is wiped dry and covered, as possible, particularly in cold weather. In dressing the navel, the object is to prevent the portion which is to come off, and the acrid matter which is

generated in the process of sloughing, from coming in contact with the skin of the belly, and thereby excoriating it, and to prevent it from being rudely drawn from its attachment to the umbilicus. This is usually accomplished by drawing the navel-string through a hole of suitable size, made in a piece of folded linen or cotton cloth, and wrapping it up with another small piece of the same. The navel-string should be drawn entirely through, so that the folded linen will come in close contact with the body of the child. To prevent it from being rudely drawn by the dressings, and an elongation and weakness thereby produced, it should be laid upward, or a little inclined to one side, and a moderately-tight swathe put around, in such a manner that it will not slip or draw upon the navel.

The only food or drink that is necessary before the milk comes is a little warm molasses or sugar and water; there is, however, no objection to giving it a tea-spoonful of cold water soon after it is born, and occasionally afterwards. If the bowels are not sufficiently free, a small tea-spoonful of castor-oil is the best medicine to move them; but as the first milk is somewhat laxative, this is not often required. If the child be griped, or in pain, a little catnip or anise-seed tea, with a minute dose of super-carbonate of soda or magnesia, may be given.

It often happens that the child does not pass any water for several days; but this is not a matter of much importance, as the secretion of the kidneys does not always commence immediately. A little flax-seed, pumpkin or watermelon-seed tea may be administered, and a thin bag of fine salt applied to the lower part of the bowels with some advantage.

After the milk has come, ordinarily, nothing else will be required; and the less the child has, either in the way of food, drink, or medicine, except what nature has provided for it, the more likely it will be to thrive and escape disease.

MILIARY FEVER.—The distinguishing characteristic of this fever is an eruption on the surface of the body, of a florid color, and resembling in size the seeds of millet. The eruption commonly appears first upon the upper part of the body, about the neck, back, and breast, gradually extending downward.

The disease commences with a shivering fit, and all the usual symptoms of fever of the typhoid kind, such as low, quick pulse, depression of the strength, anxiety, restlessness, and disturbance of the stomach, denoting a great amount of gastric irritation. It may be distinguished from other eruptive fevers by a peculiar kind of sweat, which gives forth a sour and fetid odor, by a greater dejection of the spirits, anxiety, and sighing. The mouth is dry, the tongue coated with a white fur, and the bowels costive. The disease in its worst form is attended with delirium and a comatose state of the brain.

The appearance of the eruption is preceded by an itching sensation in the skin, bordering upon pain. This, however, does not last long, before multitudes of little, hard, red pimples or pustules everywhere discover themselves upon the surface of the neck,

breast, and back, extending to the lower parts. The completion of the eruption commonly gives relief to the fever. After about two days, the eruption becomes vesicular, and discharges a watery matter which dries into a scale. A second crop of the pustules, or a relapse of the disease, will occasionally occur.

A sudden disappearance of the eruption, with great anxiety, dejection of the mind, violent vomiting, and a weak, rapid, intermitting pulse, are bad symptoms, and portend an unfavorable termination of the disease.

This disease is mostly confined to females and to childbed. Males sometimes have it, but the occurrence is rare.

The miliary fever is not regarded as a distinct disease, but as the result of other diseases or peculiar conditions of the system. The time of its appearance is, for the most part, in the spring and autumn. The chief cause of it appears to be the exposure to too great a degree of heat. An overheated room in childbed is particularly liable to produce it.

The patient, in this disease, should be covered lightly, and the room freely ventilated by the admission of fresh air.

Blood-letting is pernicious and inadmissible.

The system must be supported by wine whey, quinine, elixir vitriol, and other tonics and stimulants. To allay the disturbance of the stomach, the patient may take the essences of cinnamon and peppermint, the camphor mixture, camomile tea, and moderate doses of the hot-drops. The bowels should be moved with magnesia or castor-oil, as often as every day, and the stomach refreshed with water or barley gruel, rice-water, and other vegetable liquids, suitable to a febrile state of the system.

In case the eruption recedes, the spirits of camphor, the water of ammonia, and saffron tea, should be given to raise a perspiration. Dry heat may be applied to the surface, or the feet immersed in hot water.

If the brain is much affected, blisters should be placed upon the back of the neck, and mustard poultices upon the feet.

MILK FEVER.—This fever arises from the condition of the breasts after childbirth. In most cases it amounts only to a few chills, a slight pain in the head and back, a little sickness at the stomach, and a short turn of restlessness, with thirst. But in some instances there is an obstruction in the flow of the milk, and the breasts will become hard, tumid, and painful, denoting more or less inflammation.

A dose of oil, given immediately on the appearance of these symptoms, followed by small doses of spirits of nitre, to raise a sweat, will be the proper course to pursue. The child must be put to the breast, or it must be drawn by another person. In case the breasts cannot be drawn either by the child or by another person, the breast-pipe or the breast-pump must be used.

Much may be done to prevent the fever by putting the child early to the breasts, and by inviting a flow of the milk. Where there is a great and forcible flow of the milk, the mother should

adopt a spare diet, and abstain as much as possible from drinking. If there is considerable heat, thirst, and restlessness, Rochelle powders, sweet spirits of nitre, and the sal nitre may be given. On the appearance of any symptoms of fever in childbed, the breasts should always be carefully watched, and early and closely examined. If cakes or any hardness appear, they may be easily dispelled, in the commencement, by frictions with warm lard or fomentations.

MILK-WEED, WILD OR SCENTED—Lettuce.—The wild or strong-scented milk-weed is a perennial plant, which grows to three or four feet in height, and is prickly on its lower end. Its blossoms are numerous and yellow, leaves horizontal, indented, and arrow-shaped.

The plant contains a great quantity of milky juice, which smells like opium, with an acrid, bitter taste. This juice is narcotic, laxative, exceedingly diuretic, and considerably perspirative. Its high reputation in the cure of dropsy entitles it to attention. The leaves are the medicinal part. An extract may be made from the juice of the leaves, and given, in the dose of three grains, three or four times a day. Like opium, it produces sleep, and mitigates pain; it quiets the nerves, and relieves the difficulty of breathing in dropsy of the chest. It is a medicine which requires some care in using it.

MINERAL WATERS.—Mineral waters hold in solution various ingredients, such as iron, salts, sulphur, gases, and earths. They furnish many medicines in the most agreeable way, and in the most suitable form in which they can be taken. The most remarkable are those which contain the carbonic acid gas. The water, when taken from the spring and poured into a glass, evolves innumerable sparkles. It has a lively, pungent, brisk taste, and produces a grateful sensation in the stomach. All such waters are peculiarly friendly to the digestive organs.

The chalybeate waters, or those which contain iron, are the most common and the most used. It is their peculiar nature to strengthen the stomach, and, eventually, the whole system. These spring waters are often perfectly transparent and beautiful, while they hold in invisible solution a large quantity of iron, which may be detected by a styptic taste. On standing, however, the iron rust is soon disengaged and precipitated, and the stones and earth about the spring become covered with a reddish deposite. The iron first forms upon the surface of the water a delicate pellicle or skin, which, by increasing in weight, sinks to the bottom, and may be scraped up.

There is a spring in Virginia which contains a great abundance of sulphureted hydrogen gas. This spring possesses a temperature much higher than the air, and, in both winter and summer, pours forth a stream of hot water. It is celebrated for the cure of skin diseases and the rheumatism.

The Ballston spring, in New York, contains both salts and iron. Its water is cathartic, diuretic, and tonic; that is, it purges the

bowels, promotes the urine, and strengthens the stomach. The Congress water, at Saratoga, is of the same nature. These waters are resorted to in almost all chronic complaints, especially *dropsy*, *scrofula*, *dyspepsia*, *hypochondrism*, *hysterics*, *palsy*, *chlorosis* or *green sickness*, *whites*, *gout*, *chronic rheumatism*, and *eruptions upon the skin*; and the estimation in which the efficacy of the water is held is not probably overrated.

MISCARRIAGE.—One of the greatest accidents to which pregnant women are liable is the loss of the child, or rather of the fœtus, before the time of delivery. This often happens very soon after conception, even before the child is completely formed in the uterus. It is often not very easy to distinguish, in newly married women, between a difficult menstruation, an extraordinary discharge of clotted blood, and a miscarriage. The pain in the back and about the loins, the faintness, uneasiness, and loss of blood from the uterus, are, in the commencement of pregnancy, nearly the same in each case. It is also difficult to distinguish between the hard masses of clotted blood and the newly-formed fœtus. The distinction can, however, be made by throwing the discharges into a vessel of cold water and mixing them with the water; blood will entirely dissolve in the water, while a fleshy substance will remain entire.

There are certain kinds of false conception, to which women are subject. These false fœtuses, or moles, as they are commonly called, are small, formless lumps of flesh, which cause as much trouble and loss of blood, in their separation from the uterus, as the most perfect conceptions. These moles never appear to arrive at any great size, or to continue their growth in the uterus for any great length of time. From three to six weeks is probably the longest period to which they ever arrive, before their expulsion from the uterus. They are organized masses of flesh, but without the form and shape of a human being.

Miscarriages or abortions, which we use as synonymous terms, are in general owing either to accident, or to some weakness or defect in the constitution. A fall, a blow, overstraining, or exertion in some way or other, are the most usual causes of miscarriages in women of sound constitutions. Tight lacing may also be added to the list of incidental causes. Miscarriages are sometimes produced by violent bursts of passion, the sight of hideous and disagreeable objects, or by the smell and taste of certain nauseous drugs and poisons. And when once a disposition to miscarriage has been commenced, it often continues and increases for years, insomuch that some women will go on miscarrying for six or seven or even a dozen times in succession.

There is a certain irritability or feebleness of the uterus, or of the whole constitution, which is probably the most frequent cause of miscarriages. In this class of women the uterus appears to be, at least for some time, incapable of bearing the burthen imposed upon it, or of distending only to a certain size, before it is irritated to such a degree as to admit of no remedy short of the expulsion of the

fœtus. An instance is recorded of a woman who miscarried twenty-three times in succession.

Miscarriages are not often dangerous, although sometimes accompanied with very profuse hæmorrhage and considerable faintness. The fainting, in general, checks the flowing of the blood, and prevents the over-action of the uterus.

The ordinary symptoms which threaten a miscarriage are frequent pains in the back and about the loins, and a sudden loss of blood from the uterus. The flowing in a miscarriage is distinguishable from the flowing in an ordinary monthly period, by its coming away in gushes and forming into clots in the former case, whereas, in the monthly sickness, it is even and constant, and does not coagulate.

Remedies.—The first thing to be done in a miscarriage, or a threatened miscarriage, is to resort immediately to the bed or sofa, or some place where the patient can lie down and be quiet. The room should be cool, air freely admitted, and the utmost quietude preserved. If fainting occurs, a little cold water should be thrown upon the face, and a draught or two should be given the patient to drink. A tea-spoonful of the spirits of camphor may be added to the water. As miscarriages are sometimes prevented after they have commenced, by proper care, attention, and medicines, the first object will be to secure this result. In very strong, full-blooded women, blood-letting will, in certain cases, be necessary, although very rarely. After the miscarriage has once happened, and a disposition to this accident is suspected, blood-letting may be resorted to as a prevention in a second pregnancy; but it should be done about the time the first miscarriage happened, and before it has actually commenced.

After the patient has become quiet in bed, a tea of white poppy heads, or of dried lettuce leaves, should be given, two or three times, or until composure has been secured. In case these articles cannot be obtained, or do not have the effect, thirty drops of laudanum, or a table-spoonful of paregoric, should be given every four hours until the pains are allayed and the flowing checked. The tendency to abortion will often continue for three or four days before all the symptoms entirely disappear. Where the flow of blood is profuse, vinegar and water should be applied to the body below the abdomen, by means of linen or cotton cloths; and if the loss of blood is excessive, a piece of sponge, or a soft linen cloth, should be pressed into the vagina.

When the event has become unavoidable, the expulsion of the contents of the womb should be promoted by drinking cold water and the administration of the spurred rye. A table-spoonful of a strong infusion of this medicine may be given every twenty minutes until the desired effect is produced, or as long as the stomach will bear it.

The diet should consist of broth, water gruel, milk porridge, and of light vegetable food. The drink should be barberry-water, lemonade, apple-water, and cream of tartar water.

In all cases of a constitutional tendency to miscarriage, great care should be taken to preserve a quiet state of the mind and feelings, and to avoid all violent exertions of the body. Free exercise in the open air and about the house should be taken during the time of gestation, but all violent motions avoided. Riding in an easy carriage, or sailing in a boat, is a kind of exercise very friendly to those who are constitutionally disposed to abortions. All drastic purgatives should be avoided, and exposures to great heat and cold.

When a miscarriage has really taken place, and the fœtus expelled, the same precautions should in general be observed as in actual childbed.

MONTHLY SICKNESS — Menses, Menstruation. — Every healthy woman, from the age of about fourteen to forty-five, is subject to an effusion of blood from the womb once every month. It is a secretion like the bile or the milk, and appears to be essential to the reproduction of the human species. This effusion never amounts, in health, upon an average, to more than five or six ounces, nor continues more than about three or four days. The time of its appearance in females varies with the heat of the climate. In the West India Islands and in Mexico, girls begin to menstruate at eight, nine, and ten years of age, and in Labrador not until they are nineteen or twenty, and then at long intervals and in small quantities. In some instances, they only menstruate in the summer time.

Some girls begin to menstruate without any previous ailment, but most commonly the effusion is preceded by pains in the back and legs, a dragging sensation in the situation of the womb, disorder of the stomach, frequent changes of the blood to and from the face and head, and various nervous and hysterical affections. These symptoms, in a greater or less degree, commonly attend the lunar appearance as long as it continues.

In our latitude, the monthly evacuation, or puberty, begins about the fourteenth year, or a little earlier. We think, in New England, it begins rather earlier in life than in England, and a full year earlier than it does in Scotland. In our country towns, girls are full a year later in this manifestation of womanhood than in the city. The inactivity, easy way of living, subjection to hot rooms and soft beds, the stimulation of a fresh meat diet highly seasoned, and the constant excitement both of the mind and body, all tend to foster a premature development of the functions of the body in cities; while in the country towns, the active employments of children, their less stimulating food, their cooler habitations and constant exposure to the open air and sun, serve to harden the constitution, and to render all the functions of the system slower in their development.

The way of life in the country towns of New England is worthy to become a pattern for a healthy regimen. We mean where the girls take a part with their 'mothers in all the household affairs; churning butter, making cheese, milking cows, feeding pigs and hens, geese and turkeys, washing, ironing, cooking, and looking

after the welfare of the family. A constitution formed in this way possesses more strength and energy than a dozen which have grown up in the city, unless in some fortunate instances where parents have preferred the health of their children to delicate looks and early refinement. Girls should always be allowed, while growing, to run, romp, and play as much as boys. If they are restrained, their constitutions are sure to feel the effects of it. Many more children are raised in the country towns, in proportion to the number born, than in cities, and the disorder of the menstrual function is, beyond all comparison, less there than in the cities.

In some instances, the menstrual office is not performed at the proper time, or is obstructed in its course after it has been once established. In either case; the girl should be taken from school, or from any employment which requires a sedentary life, or which in the least fatigues her mind, and sent abroad into the open air, and obliged to take exercise enough, at least twice a day, to produce a moderate perspiration. The perspiration is a sign that the exercise has increased the circulation sufficiently to affect all the functions of the body. If some kind of active employment can be substituted for riding, walking, and playing, so much the better. Books should be laid aside until the natural order of things is well established. The menstrual effort is commonly preceded, in its first appearance, by a general uneasiness, pains in the back and hips, nausea, sickness at the stomach, and headache. At this period, hot fomentations of tansy tea, or poppy tea, should be applied to the back, hips, and below the stomach, and the patient made to sit over a vessel of steaming water until a profuse perspiration has been produced. Unless this effect is produced, we believe but little advantage will be obtained from the use of these means. Half-way measures often defeat the effect of the best-directed means. If a perspiration is not easily effected, it may be assisted by a gentle emetic of ipecac. or lobelia.

The best and most powerful medicines for the regulation of retained or obstructed menses may be found upon almost any farm in New England. The first article which we shall name is the savin. The tops and leaves of this tree, ground into a powder, or made into a tea, and taken or drank in a sufficient quantity to raise a perspiration, for several days in succession, have been ascertained to produce the menstrual effusion in four cases out of five. The dose in powder, which is the best way of giving it, is a scruple at a time. It should be given at least three times a day.

The next medicine, whose virtues are established in the regulation of the menstrual effusion, is the red centaury. A strong tea should be made of it, and copious draughts of it taken hot, every hour or every two hours, at such times as nature appears to be making an effort, until a moisture is produced upon the skin.

The tansy is another article of tried virtues in establishing the uterine secretion. The tansy tea drank warm is the best way of using it, although the essence is often used. We apprehend that

little advantage will be derived from it, however, unless a moisture is produced upon the skin. We regard a sweat as a criterion by which to ascertain the effect of these medicines upon the uterine secretion.

Rue is a powerful herb in promoting the circulation in the womb, as well as the system generally, and well adapted to the treatment of a retention of the menses; as it is more powerful than most herbs in common use, it should be used with more caution. Of an infusion made by steeping an ounce in a pint of boiling water, from a wine-glassful to a gill is the usual dose. It may be taken several times a day, and particularly if there are symptoms indicating a monthly period.

In those cases in which it would seem,—from the full development of the system indicating the age of puberty, and from the periodical indispositions, headache, pain in the back, loins, and limbs, weariness, debility, pale countenance, with occasional flushes upon the cheeks, irritability and capricious appetite,—that this evacuation has become necessary to health, and when, from a want of development of the uterine system corresponding with other parts, or from an inability in the general system to furnish the secretion, it does not make its appearance, a course of tonic and emmenagogue medicines will be indicated. Fifteen or twenty grains of precipitated carbonate, or the same quantity of the phosphate of iron, should be given twice or thrice a day, mixed with molasses, and the bowels should be briskly moved three times a week with Hooper's pills, or some aloetic purgative. Picra, and pills composed of aloes and gum-guaiacum, are suitable purgatives in these cases. Equal parts of elixir pro. and tincture of guaiacum, in doses of two tea-spoonfuls, three times a day, on an empty stomach, we have often given with advantage, combined with a course of the carbonate or phosphate of iron. Perhaps, however, there is no better medicine to regulate the menstrual function than the mixture of myrrh and iron, called Griffith's myrrh mixture. We have frequently combined it with apparent advantage with the elixir pro., in the proportion of one part of the latter to three of the former, using one quarter less water in preparing the mixture. Of this preparation, a table-spoonful should be taken three or four times a day. It is a safe and efficient medicine, and peculiarly appropriate in the deranged condition of the digestive organs which frequently attends these cases, and in those cases which require a long-continued course of medicine. When it is presumed, from the symptoms, that nature is making an effort to produce the discharge, the feet should be thoroughly bathed in hot mustard-water, the patient should sit over the steam of hot water or a decoction of bitter herbs, a strong poultice should be applied to the feet, and perspirative herb tea be freely drunk. A leech or two applied to the inside of the knee will sometimes, under these circumstances, very much relieve the symptoms, and has, in some instances, brought on the monthly discharge.

Until the system is fully developed, and the signs of puberty are well marked, or until there are symptoms manifestly requiring the establishment of this evacuation, a resort to medicine, or any interference with the natural operations, is of doubtful propriety.

MORPHINE—*Morphia*.—This article is obtained by a chemical process from opium, and is the narcotic principle of that substance. It consists of white, transparent crystals, without smell. It does not dissolve well either in cold or hot water, but better in alcohol and ether. The crystals are rectangular, four-sided prisms. The solutions of it have a nauseous, bitter taste. Combined with the acids, it forms salts which appear to have the same medicinal properties as the morphine itself. The salts of morphine in common use are the sulphate, made by diluted oil of vitriol, dissolving the morphine in it, and evaporating to dryness; and the acetate and muriate, made in a similar way, with the acetic and muriatic acids. Either of these salts dissolved in distilled or spring water, may be taken in drops like laudanum.

The pure morphine, or *morphia*, may be given in the form of a pill or a powder, in the dose of a sixteenth, an eighth, or a quarter of a grain, once or twice a day. In all cases where it would be proper to give opium as a sedative, the morphine may be used. Many persons, with whom opium disagrees, can take morphine and its salts with impunity. In febrile and inflammatory diseases, the morphine in some form or other is deemed to be more suitable than opium. Where astringent effects are needed, as in dysentery, diarrhœa, cholera morbus, and hemorrhages, the opium is preferable.

The dose of acetate of morphine is from one eighth to half a grain; one sixth of a grain is equivalent to a grain of opium. It may be given in pill, powder, or solution.

A dose of the sulphate and muriate is the same. The sulphate of morphine is in the most common use. It consists of snow-white feathery crystals, which are completely soluble in water. Solutions of it should always be made of the same strength with laudanum.

MORTIFICATION.—The proper meaning of mortification is the death of the part. Mortification appears to take place from almost every species of disease, but is most usually the effect of active inflammation which has suddenly and entirely exhausted the vitality of the part.

The usual signs of mortification are a loss of feeling, heat, action, and cessation of circulation in the part affected, which ultimately extends to the whole body. Most commonly, the mortification begins in a particular part, but there are some putrid diseases and fevers where the whole system mortifies at once. Mortification often takes place in the surface of the body, and in the extremities, and, sometimes, in the internal parts not very essential to life, without producing the death of the whole body. We often see the fingers and toes mortify and drop off without

materially affecting the other parts of the system. The skin, muscles, and bones, will often be so much injured in certain portions as to mortify and slough off, while the uninjured parts will granulate and restore the lost portions.

The ordinary appearances of a mortified part are a purple or brownish tinge of the skin, a blister containing a bloody serum, and a crepitus, or, sound of air.

Where mortification terminates fatally, the event is foretold by a livid, purple color of the part; sometimes, an extrication of air or gas under the skin, which occasions a slight rattling like air in a bladder; a deathly smell; loss of heat, feeling and motion; a small, quick, soft, vibrating pulse; a cadaverous countenance, hiccough, and a cold, clammy sweat.

Inflammations which are circumscribed and tend to suppuration are less likely to mortify than those which spread and involve many parts or tissues at a time. Or, to write more professionally, phlegmonous inflammations are less apt to run into gangrene than erysipelatous. Where an inflammation or a wound has been very painful, and suddenly becomes easy, and loses its feeling, we have reason to apprehend mortification, unless healthy suppuration or resolution take place. We have, however, seen people very much frightened and alarmed at the sudden cessation of painful affections which had very suddenly terminated favorably. If the body is warm, the pulse good, and the feeling remains entire, there is never any need of alarm.

Mortification will often take place from a compression of the blood-vessels and a stoppage of the circulation. Nothing is more important in wounds, bruises, and injuries of parts, than to leave them as free as possible, by removing all ligatures, bandages, and tight dressings. We never shall forget an instance of mortification which appeared to happen entirely from winding a tight rag spread with common varnish around a jammed finger, and left in this situation for two or three days, by which the circulation was stopped and the finger lost. The whole arm was so much affected as to be, for some time, in great danger; but seasonable amputation of the finger saved the arm, and probably the life, of the patient.

The constitutional remedies suitable in cases of mortification are quinine, myrrh, wine, charcoal, camphor, alcohol, brandy, hartshorn, and the mineral acids. To these, may be added iodine, the chlorides of lime and soda, salt, saltpetre, vinegar, creosote, and the wild indigo. In wounds, inflammations, and sores, where mortification is liable to take place, there is no dressing, in our opinion, so suitable as a soft, warm, thick, white bread poultice; it leaves the part entirely free, while the warmth which it communicates, if frequently changed, has a tendency to restore the life of the part. This was the favorite dressing of the celebrated John Hunter, even in green wounds where gangrene was apprehended, and, we believe, experience abundantly confirms its superiority over all others.

The local means suitable to be used in cases of incipient or threatened mortification are, charcoal, laudanum, alcohol, the spirits of camphor, the tincture of myrrh, a watery solution of quinine, a decoction of the Peruvian bark and of the wild indigo-root, yeast, pyroligneous acid, creosote, the chlorides of soda and lime, a solution of common salt, warmth, and carbonic acid gas, liberated from lime-stone by the agency of sulphuric acid.

Where mortification of the bowels is suspected, soda-water, which contains an abundance of the carbonic acid gas, should be freely drank. Wine, brandy, rum, and cordials of every kind, are not only allowable in some of these cases, but are absolutely indispensable. The warmth of the body should be restored and supported by dry, hot blankets and flannels applied to the surface, and by the use of hot drinks.

Cold not only causes, but generally hastens, mortification. Frequent doses of the hot-drops, composed of red pepper and myrrh, are, no doubt, a valuable medicine in an incipient stage of any internal or external mortification. The stimulus is evanescent, and must be taken often, but it promises as much as any medicine which can be used in such cases.

A peculiar kind of mortification, called the *dry* mortification or rot, sometimes attacks people, especially those advanced in life, while they are apparently in perfect health. It most commonly attacks the extremities,—the hand, foot, toe, or finger. It commences in a small spot, and gradually extends up the leg or arm. The mortified part is dry, shrivelled, hard, and dusky. In some instances, the color is not changed, but it is generally black. The dry gangrene often affects palsied limbs. The part does not putrefy, but dries up and looks like a piece of smoked meat. The whole arm is said to have rotted in this way, and to have dropped off at the shoulder joint without the least bleeding, and without the loss of life.

Laudanum, camphorated oils, and warm balsams, are the chief remedies. In most cases the dry gangrene is fatal.

MOSS, ICELAND—*Lichen Islandicus*.—The Iceland moss is a species of liverwort or rock-moss. Its taste is slightly astringent and bitter. It contains a remarkable quantity of mucilage, and is used by the people of Iceland as an article of food. If dried or infused in water, its astringency and bitterness are destroyed. It is celebrated for the cure of consumption. It certainly has an excellent effect in moderating and soothing a cough; and the mucilage which it contains affords considerable nourishment, which is easily digested and congenial to the stomach. The trial with this, as with most other medicines, is apt to be imperfect and incomplete. To have a permanent, sensible effect, it should be used for several months.

An ounce and a half should be boiled in a quart of milk, over a slow fire, for fifteen minutes. Water may be used if milk disagrees with the stomach, and a syrup made by adding a proper quantity of sugar. Three ounces or a gill may be taken, five or

six times in a day. It is supposed to neutralize and correct the acrimonious state of the juices of the body.

In chronic dysenteries and diarrhœas, it has likewise proved effectual. Its properties are simple and harmless, and the article is well adapted to popular use.

MUCUS.—Mucus resembles jelly in its external appearance, but is wholly distinct from it in its chemical composition. It is a secretion of the mucous membranes, and nothing in the animal economy is more remarkable than the prodigious amount which is often poured forth by these membranes in a short space of time. The nostrils, throat, bronchia, and lungs, are often loaded with a literal flood of this substance.

Mucus resembles pus, inasmuch that it is often difficult to distinguish one from the other. Mucus is, however, the lightest, and will swim upon water, whereas pus will sink. It has a saltish savor, and is transparent, and glutinous. It appears to be composed of shreds. Its use is to lubricate and defend the various passages and surfaces which secrete it. The taste, smell, and appetite, are all more or less dependent upon this secretion. A part of the mucus is reabsorbed by the membranes which secrete it, and the remainder is excreted or thrown off. It contains water in abundance, muriate of potash and soda, lactates of lime and soda, and phosphate of lime.

MUGWORT—*Artemesia Vulgaris*.—The mugwort is an aromatic and a bitter. The taste of the dried root is sweetish, sharp, and nauseous. The tops, leaves, and roots are said to be effectual in the cure of epilepsy or falling fits, and are excellent for after-pains. The plant must be carefully dried and kept in a close vessel.

MUMPS—*Cynanche Parotidæa*.—The mumps is an inflammatory disease of the maxillary and parotid glands. The disorder is epidemic and infectious. It is a disease of infancy and early life. It comes on with chills, a feeling of soreness in the bones, and a swelling and soreness in the neck and in front of the ears. The tumors sometimes appear on both sides, and at others only on one. The swellings are movable, hard, sore, painful, and occasionally of a large size. They sometimes produce a difficulty of swallowing and of breathing. Other glands of the body are affected at the same time, and in the same way. In man, the testicles partake of the same kind of inflammation, and in women, the breasts. These several glands will sometimes suppurate and cause considerable mischief. When the glands of the neck have broke inwards, they have been known to produce suffocation and death. In ordinary cases, however, the disease is mild, and requires only a little good nursing, and care that the body be kept warm and dry. The child should stay in the house, and if the swellings are painful, should take a dose of paregoric or Godfrey's cordial, and be got into a sweat by the use of hot herb teas, such as pennyroyal, peppermint, or catnip. A large, thick piece of flannel, or, which is better, a clean woollen stocking, should be worn

around the neck, and the food should consist of rye pudding, or brown bread, with sweetened water.

If the swellings and inflammation become severe, bleeding, cathartics, and sudorifics will be required. The glands must be steamed, poulticed, or bathed with cooling applications. Leeches must be applied, and every effort made to reduce the inflammation of the glands, and subdue the fever.

MURIATES.—These are the salts formed by the union of the muriatic acid with metals, alkalies, and earths; such as common salt, calomel, corrosive sublimate, muriate of iron, lime, &c.

MUSCLES.—People, in general, have formed but very little idea of what is meant by a muscle. The flesh which covers the bones appears, to an unpractised eye, to be one entire mass.

The red flesh is a bundle of muscles, separated from each other by a thin, transparent membrane. The flesh of the legs, for instance, is separated by dissection into fifty or sixty muscles, one half of which are destined to bend and move the legs, and the other half to straighten them. Some of the muscles are round, and others flat. The large muscles of the leg are about an inch, or an inch and a half, in diameter, and of a cylindrical form. The middle of the muscles is much larger than the ends, and for this reason is called the belly. The middle portion is also of a red color, being filled with blood-vessels and blood, and the ends are of a white color, being destitute of red blood, and are called tendons or cords. The cords are called the tendinous portions of the muscle. When the flesh or fleshy part of the muscle is soaked, it becomes white. It is only the blood that gives the flesh or muscles their red color. When deprived of its blood the muscle appears to be one entire tendon.

Each muscle is separable into an innumerable number of fibres or threads, and each fibre, like the whole muscle, is enclosed in a thin, transparent sheath of cellular membrane. The same membrane covers all the bones, and is called the periosteum. The fibres which compose the muscles may be seen and separated from each other in a piece of boiled beef or mutton. The lean meat is only a mass of muscles, which in life are employed in effecting the motions of the animal. Each muscle slides backward and forward in an oily sheath, as it is called into action by volition or stimulus. The flesh of the animal is, therefore, employed in producing its various motions. This is its object and its use. The amount of muscle which an animal has depends upon the quantity of food and exercise which it takes.

MUSTARD-SEED—*Sinapis Alba* and *Nigra*.—With us, the black mustard plant is very common. The seed communicates both warmth and vigor to the stomach and blood. In a dose of a table-spoonful, either the black or the white mustard-seed operates as a laxative. It is the most active in the form of a powder. It promotes an appetite and gives a glow to the whole system. It is an excellent remedy in dyspepsia, given every day as a laxative. In palsy and chronic rheumatism it is given to quicken the

circulation and promote the vital actions. The ground seed makes an excellent poultice to relieve rheumatic pains, and to produce a revulsion in the circulation of the blood. Boiled with milk it makes a medicinal whey, useful in low nervous fevers. In its effect upon the system, it resembles the red pepper. In a large dose, it will excite vomiting.

MYRRH. — This substance is a gum resin. It is brought from the East Indies. Myrrh is semi-transparent, of a reddish-yellow color, and of a slightly pungent, bitter taste. Its smell is aromatic; to the palate it is nauseous; to the system it is warming and strengthening. It has, when taken as a medicine, a strong tendency to resist and stop putrefaction, and is much used in putrid, malignant, and pestilential fevers.

The proper dose of myrrh is from twenty to thirty grains, in powder. It is an excellent medicine in palsy, dyspepsia, and chlorosis.

A tincture of myrrh is made by putting three ounces of the gum into a quart of new rum. A dose of the tincture is a tea-spoonful.

N.

NAPHTHA. — This is a bituminous fluid, which is found springing spontaneously from the earth. It is of the color and consistence of molasses, has a greasy feel, and a smell like the smoke of bituminous coal. Applied to stiff joints, rheumatic swellings, and palsied limbs, it has often been found extremely serviceable. It is of the same nature with bitumen, distilled from certain kinds of coal. Naphtha burns like oil, and for many purposes is used in its stead. It is found in the West Indies, and in the south of Europe. It sometimes appears upon the surface of certain lakes, and is skimmed off. It is but little used in medicine. See *Wood Naphtha*.

NARCOTICS. — Medicines which produce sleep, such as opium, lactucarium, cicuta, belladonna, and camphor.

NECROSIS. — The mortification and death of bones. When bones are diseased, the dead parts separate from the living in the same manner as dead flesh. The dead pieces are pushed off, and make their way to the surface. Necrosis, for the most part, arises from fractures and injuries, or from the extension of sores on the flesh to the bones beneath it. See *Mortification*.

NEPHRITIS. — Inflammation of the Kidneys. — See *Inflammation of the Kidneys*.

NERVES. — The nerves are round, white, long cords, which proceed from the brain through various holes or foramina in the skull bones, and from the spinal marrow. Those nerves which go to the senses proceed immediately from the brain. Those which go to the trunk and extremities mostly proceed from the

spinal marrow. Each nerve is enclosed in a sheath of thin, transparent membrane, which keeps its action distinct from that of every other nerve. The nerves proceed from the brain and spinal marrow in pairs, one nerve going to either side of the body. As they issue from the brain they cross each other, so that the nerves of the right side of the body come from the left half of the brain, and the reverse. It is from this cause that a blow upon the right side of the head will palsy the left side of the body.

It was long thought that the same nerves produced both sensation and motion; but it has been recently demonstrated that they form two distinct systems, so that sensation may be destroyed and motion remain, and the reverse.

It is the office of the nerves, spinal marrow, and brain, to generate sensation, thought, feeling, and motion. Wherever we find a nerve, there we find sensation, or a capacity for pain and pleasure or action. The opportunity which people in general have of seeing the nerves is not very frequent. They are often confounded with the sinews or tendinous cords. The substance of which a nerve is composed may be learned by inspecting the brain of a calf. It is often that nerves may be seen in dishes of boiled beef and mutton. There are but very few parts of the animal system that may not be learned by an attentive observer in the flesh which is daily brought upon our tables; the nerves, arteries, veins, ganglions, muscles, the different organs, and bones, may all be discriminated from each other.

If a nerve is separated, or entirely cut off, all motion and sensation of the part to which it goes are instantly lost. Divided nerves, however, like divided muscles, often grow together again, and the feeling and motion are restored.

The nerves form a kind of net-work over the whole internal and external surface of the body. The skin is, however, much the most bountifully supplied with them. Where there are the most nerves there is the most sensation. The eyes, ears, and all the organs of sense, are better supplied with them than the other parts. The bones and the tendons have but a small supply of nerves, and, hence, have but little feeling, unless they are inflamed. The use of the little nodules, called ganglions, into which the nerves are convoluted, is not known. The nerves have blood-vessels, and are susceptible of inflammation and disease, like the other parts of the body.

NERVOUS DISEASE. — The seat of this disease is in the brain and nerves. The condition of the nervous system which constitutes the disease is not discernible after death; we think, however, it must be owing to a sore and tender state of this system, or, in other words, to a slight degree of inflammation. The word *soreness* appears to us to express the precise condition of the brain and nerves in what is commonly called nervous disease. A slight degree of soreness constitutes the nervous disease; a greater degree of soreness constitutes hypochondrism; a still higher degree constitutes insanity; and the highest degree,

phrenitis or acute inflammation of the brain. These different degrees of soreness are often discernible in the eyes, in the throat, in the muscles, and in the skin, and the different grades are as discernible by the eye as by the consciousness of the person who is the subject of them. When, therefore, the nervous system is in this state, it must be treated like every other organ which is in the same condition.

Some writers confound this disease with dyspepsia, which is a disorder of the stomach; others confound it with hypochondrism; and a third class, with melancholy. The disease which we mean here to describe arises from over-action of the brain, or of the thoughts, feelings, passions, instincts, and propensities. The dyspepsia arises for the most part from an over-action of the stomach; and nervous disease from the same excess on the part of the brain. By over-action, we mean the amount of action which each of these organs, in various ways, sustains; or, perhaps, we should be better understood by saying that the nervous disease and the dyspepsia are produced by the amount of sufferance which each organ endures. The nervous disease is produced by the sufferance of its own function. The dyspepsia is also produced by the sufferance of its own function, but which is entirely different from that of the brain.

Nervous disease sometimes commences in childhood and youth, before the subject is old enough to be aware of the nature of the disease; but commonly does not appear before the age of puberty, and occurs the oftenest between the ages of thirty and forty-five.

Sleep is a peculiar function of the nervous system, and seems as essential to life and health as the digestion of food. Nervous diseases may be better known by an indisposition to sleep, or by wakefulness, than by any other symptom. There are periods when the difficulty of sleeping is so great that a whole week or more will pass without once closing the eyes, or if the eyes should be closed, there is no sleep. The general health all the while will be as good as that of other people, with the exception, perhaps, of a little costiveness of the bowels. It is said that the nervous disease is sometimes attended with too much sleep; but we have never seen a case of it. In the beginning of the disease there will not be much disturbance in the sleep, but in process of time there will be more or less almost every night. Painful dreams, nightmare, and all manner of distressing appearances and frightful images, will occupy the mind the whole night long, or at least the forepart of it. The most quiet sleep of nervous people is towards morning, or late in the morning.

A swimming of the head is a pretty constant symptom of nervous disease, especially on suddenly rising up. A lightness of the head is a still more common feeling. Sometimes the whole body will feel buoyed up and as light as a feather, and at other times peculiarly heavy. Sometimes it will feel very small, and at other times, exceedingly large. To what this difference in the

consciousness of the weight and size of the body is owing, we are unable to say, but such is the feeling. Some nervous people are constantly plagued with a sick headache, and others with a violent pain in a part of the head, confined to a spot not larger than a ten-cent piece, and as inveterate as if a nail were driven into the head. A singing sound in the ears, or a ringing, which is sometimes superstitiously mistaken for the real ringing of a bell, which has been mysteriously heard, is sometimes very annoying. In the healthiest people this affection of the drum of the ear is no very uncommon thing, but when the nerves are diseased it becomes much more frequent and obvious. A sudden departure of the sight, or darkening of the room, especially by some untoward movement of the head, and a little consequent bewilderment or confusion in the thoughts, are very common symptoms of nervous disease. A numbness of the head and of other parts of the body is very common, and oftentimes temporary pains and soreness in the flesh, and in every organ, which causes the person to imagine himself affected with various diseases at various times. Wind in the stomach and bowels is a very troublesome symptom; and as the tract of the alimentary canal is not very well known to people in general, this wind, in travelling up and down, will produce sharp pains in the whole trunk of the body, which will sometimes be mistaken for pleurisy, disease of the liver, heart, and every other organ in the vicinity of the bowels.

Sudden departure of the thoughts, or loss of all the ideas, is often complained of by nervous people. Cold hands and feet, cold shiverings, flushes of heat, paleness of the skin, sunken eyes, little twitchings and quiverings of the flesh, wandering, flying thoughts, a painful want of energy, disposition to faint on any sudden emotion, violent palpitations of the heart, and a feeling of dissolution, or apprehension of being in the article of death, are among the prominent symptoms of nervous derangement. The fear of dying some disgraceful death, or of committing suicide, are among the torments of the nervous. The fear of suicide is a foolish fear, as death in this way, were it ever likely to happen, being the result of disease, is as natural as dissolution in any other way. It has happened from the foundation of the world, and will continue to happen as long as the brain and nerves continue to be diseased. But suicide is never the consequence of the grade of disease which we are here describing, but merely the fear of it, like the fear of almost everything else.

Fear is a prominent symptom of nervous disease. A nervous person will turn pale, tremble, and become deprived of strength, at the sight, hearing, or feeling of anything which is unexpected or novel. An unusual sound in the night, or a sudden tap at the door, will cause him to start and tremble as if it were a sure sign that a robber was about to enter the house. This state of the mind, or of the brain and nerves, causes the subjects of it to be constantly mistaking the meaning, actions, and purposes of others.

As the nerves extend to all the other organs of the body, and

make a part of them, each and every part is liable to some deviation from health. Nervous people are apt to make a large quantity of urine; to sweat profusely, and more easily than well people; to be more sensible to heat and cold, and more affected by the changes of the weather, and especially of the wind.

We think nervous people are more affected by changes in the weight of the atmosphere than by its temperature. We have always observed them to be very uneasy in windy weather, when changes in the weight of the air are known the oftenest to take place. There are but few people who are not more or less affected by strong windy weather.

The various affections of the stomach and bowels which some writers have attributed to an affection of the nerves, appear to us to belong to dyspepsia. In a disease of the nerves, we believe the stomach and appetite are commonly pretty good. Nervous people often eat as much as well ones, and digest it nearly as well. This circumstance, together with the interval of cheerfulness and good spirits which they often enjoy, leads others often to suppose them well, and that they make unnecessary complaints. A common complaint of a nervous person is, that, at night, he thinks of everything and cannot get to sleep. This disposition to think of everything is owing to an excitement of the brain, which must have time to subside before sleep can take place. People who are wakeful should always think of this, and never worry about the difficulty of sleeping, for it will be certain to come when the brain is free of all unnatural excitement.

Fretfulness is almost an invariable sign of nervous disease. Nothing can be more variable than the temper of a nervous person. At one moment, he will be highly pleased, and the next, as much displeased, without the shadow of a reason that other people can see, or that he himself can see, a short time after. Indeed, to name all the deviations and alienations of the thoughts, temper, feelings, and propensities, from a state of soundness and health, would require many pages.

Domestic Remedies. — It appears to us of the utmost importance that nervous people should know as much as possible of the nature of their disease, or that they should know that there is a cause for the condition they are in. They will be much more likely to treat themselves, and to be treated by others, with that care and circumspection which the nature of the disease requires. They should learn to know that they have a brain; and that this organ can be abused and disordered like the other organs of the body. It is an observation made by some author, that metaphysics, or the science of the operations of the mind, are in general more remote from the notice and attention of mankind than any other study, although they the most nearly concern us. This is strikingly true of the diseases of the brain, or the disturbance of the operations of the mind. To make the deviations of our thoughts, feelings, and temper, and the office of the brain, the

subjects of contemplation and reflection, requires no small degree of patience and self-possession.

In general, all excitement of the mind must be avoided, in the cure of this disease. Everything which tends to inflame the feelings, and strongly to engage the attention, is sure to hurt the sore condition of the nerves. All violent strifes in politics, religion, or any party affair, are exceedingly mischievous. Crowds of people, tumult, confusion of sounds and voices, and a multiplicity of new and striking objects, overpower the attention and weaken the nerves. Retirement, rest to the thoughts and feelings, and constant exercise in the open air, are indispensable conditions in the cure of the disease.

There are certain times or aggravated states of the disease when it is best to be confined to the house, and to keep as quiet as possible. Exercise at such times will only aggravate the complaint. Even the full light of the sun will make the person feel worse and indispose him to sleep. The nerves are in too tender and sore a state to be moved, and, like other inflamed organs, must be allowed to rest.

Excessively hot and excessively cold weather are apt to aggravate the disease, and the invalid should be as little exposed to either as possible. Hard work in the heat of summer should be avoided. A moderate degree of labor in some agricultural, mechanical, or nautical pursuit, is not only an excellent preventive of nervous disease, but a successful remedy.

In this disease, people appear to require more food than in firm health. This is probably owing to the activity of the thoughts and feelings. The disease is apt to be worse in the morning, and this is probably owing to the emptiness of the stomach and blood-vessels. The interval which has elapsed since the last meal has been much longer than the other intervals between the times of eating in the day-time. After breakfast the person always feels better. No exercise should be taken before breakfast, or none which produces fatigue.

The food should consist of dried and ripe vegetables, and of salted meats and fish. There can be no better diet prescribed for a person in this disease than such as is found upon the tables of the farmers of New England. The drink should be cold water, and very weak tea and coffee. Milk is a good article of diet where it agrees with the stomach. The amount of food taken should always be in proportion to the amount of exercise or labor which the person undergoes. It is dangerous to exercise or labor much without an increase of the food. The half-fed horse or ox, which is compelled to labor, shows the exact condition of the man or woman who attempts to do his or her ordinary work upon the same amount of food which they would require if idle. The strength and energy of the mind, as well as of the body, depends very much upon a due amount of food. It makes but very little difference whether the food is of an animal or a vegetable nature, provided there is enough of it, and it is of a wholesome kind. We

believe, however, that vegetable food is the most friendly both to the body and the mind.

To quiet the confusion and disturbance of the nerves, or to settle the head, as the vernacular phrase is, there is nothing better than a few draughts of poppy tea. Half a tumbler of it should be drank every half hour until some degree of composure is produced. A dose of the butternut physic, or a few pills of aloes, where the stomach and bowels are loaded, will greatly assist in producing the effect. Motherwort tea, to which a tea-spoonful of the spirits of camphor has been added, taken hot, and in sufficient quantity to raise a little perspiration, will often restore composure and sleep. Hoffman's anodyne, the acetate of ammonia, sweet spirits of nitre, the antimonial powder, or any other article which will produce a moisture upon the skin without increasing the circulation, will compose the nerves.

In severe cases of nervous disease, a few drops of laudanum or morphine are the most certain to moderate the painful feelings of the mind. All kinds of spirits are bad, and should never be used, unless to obviate some sinking of the system which can be relieved in no other way. To produce sleep, the laudanum or morphine should be taken in the day-time, at least four hours before the usual bed-time. Probably the best and most appropriate anodyne for this disease is the valerian, when obtained fresh and of a good quality. A tea-spoon even full of the powder is about the ordinary dose. It should be taken once in two hours through the day. An ounce of it may be steeped in half a pint of water, and two table-spoonfuls taken every two hours.

The cicuta is scarcely less beneficial than the valerian. One grain of the extract is the ordinary dose, given three times a day. The nerves sometimes require to be strengthened by the use of quinine, the rust of iron, or the mineral acids. The rust of iron, or Griffith's mixture, is the most appropriate tonic.

NETTLE RASH — *Urticaria*. — This disease is an eruption of wheals or blotches upon the skin, sometimes attended with fever. It shows itself in elevated red spots or ridges, often whitish on the top, which itch and sting as if pricked with a nettle. The eruption will appear in any part of the body, but does not stay long in any one place. In some instances it will last only four or five days, and in others for several weeks or months. It will often entirely disappear in the day-time and reappear in the evening, attended with febrile symptoms. Some women are troubled with it almost every summer. Certain kinds of fish, when eaten, will produce a disease which very much resembles it, such as the sea-crab, lobster, and herrings, which have led to the supposition that the nettle rash may be caused by an irritation of the stomach, and there is some ground for this supposition. It is probably owing to an unhealthy condition of the fluids of the body, acted upon by heat or some other irritating cause.

If the skin becomes very much irritated and fiery, it should be washed in a little new rum or diluted alcohol, or Cologne water;

and if there are feverish symptoms, the sweet spirits of nitre, or a gentle emetic, should be taken. A dose or two of the cream of tartar or Epsom salts will commonly be all the medicine necessary. Lemonade or the soda powders, drank every day, with a light, cooling diet, will abate the heat and counteract the itching.

NEURALGIA—Nerveache.—In this disease there is no swelling of the part nor sign of inflammation, but a darting, throbbing pain, and acute soreness or sensibility. The ache is subject to intermissions and remissions, and the disease is almost always chronic or of long duration. It has been known to attack the face, the foot, the leg, and the breast; and probably every other part to which nerves are distributed may be subject to it. It is doubtless of the same nature with the nervous headache, particularly hemicrania. In the face, it is called *tic douloureux*, and the pain shoots from the region of the mouth to the eye, and often to the ear, and over the cheek, palate, teeth, and jaws. The adjoining muscles are subject to convulsive twitchings. The pain always follows the course of particular nerves. It may be distinguished from rheumatism, hemicrania, and toothache, by the brevity of the paroxysm, the stinging agony of the pain, the absence of all swelling and inflammation, the superficial seat of the pain, and its being confined to the course of some particular nerve.

We once saw a case of neuralgia or nerveache in the leg, between the ankle and knee. The agony was intense, and lasted for about five weeks. The disease is no doubt oftener experienced than recognized.

The palliating remedies are narcotics and carminatives. The radical remedy, in obstinate cases, is the division of the nerve. Opium, hemlock, belladonna, camphor, castor, valerian, strong poppy tea, and morphine, should be used, both externally, in the form of washes and poultices, and internally, in the form of pills, powders, and tinctures. Blisters and setons have both been effectual. Stimulants and tonics must be used as the occasion and nature of the case require. Cathartics have a tendency to abate the pain. The hot bath and hot-drops are worthy of trial.

NIGHT BLINDNESS—*Nyctalopia*.—In this peculiar affection the person can see perfectly well and distinctly in the day-time, but gradually grows blind as night comes on, until the sight is totally lost, but the sight reappears again in the morning, as soon as the sun is up. This disease prevails chiefly in the hot, sunny climates, but instances of it sometimes occur among us. We have known one family, the most of whose members were subject to it, although not to that extent to which it affects people in the torrid zone.

It appears to be a disease of the optic nerve or retina, by which its ordinary sensibility to light is diminished, or, in other words, more light is required to produce the same effect in these people than in others. It appears to be to the eye what a defect in hearing is to the ear, or the nerve of the ear. In Italy it is said to be frequent, and in Egypt very common. The peasants of Italy will

often become so blind on the approach of night as to lose their way home. There is commonly some degree of tenderness in the eye, and a fullness of its blood-vessels. In some the affection seems to be coeval with birth, and in others it is produced by the agency of light, heat, and other causes.

Where the eyes are weak, tearful, and engorged with blood, the same means must be used which have been recommended in an inflammation of the eyes.

NIGHTMARE—Incubus.—A peculiar affection which attacks people in sleep. It is most common with those who lie upon their backs. The person feels conscious of being in some painful or frightful situation, and makes strong efforts to move and speak, but without effect. When he awakes he is frightened, anxious, and feeble; his heart palpitates, and the whole system is in a tremble.

It is probably owing, in most cases, to the impression made upon the mind by the dreaming state; and is, in those instances, a harmless affection. People who are sedentary, secluded from the fresh air and the sun's rays, and have no steady purpose in life, are the most liable to it.

It often results from overloading the stomach at supper, and may be avoided by an opposite course.

The affection does not appear to differ from the terror which we often experience in our waking hours, only as the state of sleep prevents the power of motion while it creates a full belief of actual danger. If it results from dyspepsia, or nervous disease, it can only be cured by curing the primary affection.

Exercise, the open air, and the cultivation of a cheerful temper, are the surest preventive and curative means in our power.

NITRATES.—Salts formed by the union of aquafortis or nitric acid and metals, earths, and alkalies. Potash, dissolved in aquafortis and evaporated to dryness, forms saltpetre. Silver, dissolved in the same acid, forms lunar caustic. The first is called nitrate of potash, and the last nitrate of silver.

NITRE—Nitrate of Potash—Saltpetre.—This article can be made by mixing aquafortis and potash, but is commonly obtained in a natural state. The earth under stables always contains more or less of it. Most of it comes from the south of Europe, where it is manufactured by leeching the earth with water. It has a sharp, bitterish, pungent taste, and consists of transparent crystals. It is very soluble in water, and explodes when thrown into the fire.

We regard saltpetre as the very best diuretic which we possess. In fevers it allays the thirst and abates the heat. We have seen it do more good in the scarlet fever than any other remedy which has ever been used. It is a powerful refrigerent.

The dose of nitre or nitrate of potash is from three to eight grains, dissolved in water, or given in powder with molasses. An overdose acts as a violent poison. It has sometimes been mistaken for Glauber's or Epsom salts, and produced the most violent effects.

In this case, a dose of ipecac. should be given, immediately followed by sweet oil.

In rheumatism saltpetre has a remarkable effect in shortening and moderating the disease. It should be given in doses of six grains, at intervals of two or three hours. In the scarlet fever it makes an excellent gargle for the throat, at the same time that it assuages the violence of the fever. By exciting a flow of the urine, it operates powerfully in relieving the distress and restoring an equilibrium to the circulation. In all fevers it is an important object to keep the kidneys free. In typhus, malignant, and putrid fevers, where the powers of life are diminished, and the circulation feeble, the sal nitre is inadmissible. Even in the scarlet fever it should not be used in the last stage.

NITRIC ACID—Aquafortis.—It is obtained from sal nitre or saltpetre. If oil of vitriol is poured upon saltpetre, a suffocating gas or fume arises, which is the real aquafortis or nitric acid. If this fume or gas is conveyed into a receiver containing water, the water will absorb the fume or gas, when it becomes the liquid called aquafortis. The application of heat is necessary in the process.

The oil of vitriol unites with the potash, and the nitric acid is set free in the form of a gas or fume.

The nitric acid or aquafortis is a very cooling medicine in fevers. It makes a sour drink like elixir vitriol, but has not quite so pleasant a taste. The dose is five drops, in a gill of cold water. It cannot be taken clear, being a violent caustic. In mixing it with water it is best to be guided by the taste. If five drops make the water too strong of the acid, more water must be added; or if it is not sour enough, more of the acid must be added.

In the venereal sore throat, the nitric acid, taken internally, is one of the best medicines in use. As a gargle, it heals the ulcers, at the same time that it communicates a healthful tone to the whole system, and counteracts the peculiar virus of the disease. In putrid and malignant fevers it is always a safe and excellent medicine. It is often used with effect in jaundice and liver complaints. It is both a tonic and a febrifuge. The method of using it is to take it as a drink once in two or three hours.

NITROGEN GAS—Azote.—An elementary air. It constitutes four fifths, in volume, of the atmosphere. When separated from the oxygen, the other principal constituent of the air, it will neither support life nor combustion. To obtain it from the air, you have only to burn phosphorus in a glass jar of common air, and allow the phosphoric fume or acid to be absorbed by water, previously introduced into the jar. This elementary air composes about nineteen parts in a hundred of the flesh and blood.

NITROUS OXIDE GAS—Exhilarating Gas—Protoxide of Nitrogen.—This gas consists of thirty-seven parts of oxygen and sixty-three of nitrogen. The common air contains only twenty-one parts of oxygen. The exhilarating gas, therefore, contains fourteen parts more of oxygen than common air. Bodies burn in

this gas with great brilliancy, and oxidation takes place with rapidity.

When breathed or inhaled, the gas produces symptoms of intoxication, and finally stupefaction. The first effect is exhilaration of the spirits and great self-reliance. Everything appears magnified and dazzling. It casts out fear, and fills the mind with pleasurable sensations and ideas, and if breathed for some time, produces insensibility to pain. In chemical lectures, it has been for many years administered, for the amusement of the audience; but in 1844 it was applied with success by Dr. Wells, of Hartford, Conn., to produce stupefaction or insensibility to pain during the operation of extracting teeth, and other surgical operations.

This gas has been long recommended as a remedy for diseases, but not, to our knowledge, applied to any great extent. In palsies, hydrophobia, hysterics, and melancholy, it would seem to be an appropriate remedy. Its effect upon the system, when inhaled, is evanescent, and, therefore, must be repeated often to produce any permanent good. We have no doubt but it will assuage the most violent pains and distress if properly administered. If anything can give vitality to the system it must be this gas.

This gas may be obtained from nitrate of ammonia, placed in a retort and decomposed by the heat of a lamp. The gas comes off from the mouth of the retort in abundance, and may be received in glass jars filled with water and inverted over a tub of water in the usual manner.

NODES, VENEREAL.—Hard, round tumors, arising from the surface of bones, in consequence of the venereal infection. They are immovable, and appear to take their rise from the thin membrane which covers the bones. After the venereal disease has penetrated the whole system, these swellings appear on the forehead, shin-bone, and bones of the arm. They are painful, and if they continue long, end in a destruction of the bone. They can only be cured by freeing the constitution of the venereal disease.

NOLI ME TANGERE—Wolf, Lupus.—This is an eating sore, or ulcer, which comes chiefly upon the face, nose, and eyelids, and is called a wolf, not from any external resemblance to one, but because it seems to devour the flesh like that voracious animal. We once had a case of this disease which spread over the whole nose, and destroyed both the skin and flesh. We succeeded in curing it by applying a solution of lunar caustic once a day. The ulcer commences in the form of a tubercle or wart, and grows to the size of a filbert, when it begins to assume the appearance of a sore. It is painful, has a callous edge, discharges a corrosive matter, and spreads rapidly over the skin.

In the early stage it may be removed by the knife. If it is entirely removed it is not apt to grow again. It resembles the cancer, but is a very different disease.

NURSING.—The term nurse, in its general sense, imports something of the same kind of office towards the sick which the

mother discharges towards her infant child. A nurse should always be a person of good sense, of sufficient health and strength to fulfil properly the duties of the employment, and faithful to the trust reposed in her or him. Kindness, gentleness of manner, an indulgent disposition, and studious attention to the calls of the sick, together with habits of neatness, may be said to complete the character of a good nurse. Some women, as well as men, have much more discernment, either natural or acquired, in adapting the means to the end, in the cure of diseases, than others. Some improve vastly by observation, while others remain nearly stationary.

The nurse may be said to work the machine, while the physician only superintends it. The nurse, therefore, has the opportunity of knowing things which must, to a greater or less extent, escape the attention of the physician, and if this opportunity is rightly improved, it must always multiply greatly the chance of cure.

If there is anything holy and sacred in life, it is the offices of the well towards the sick. To be unmindful of the agonies of the diseased, to be heedless of their wants, and to be regardless of their cries for assistance, is like looking upon a drowning man without an effort to save him.

Sickness, whether in the hovel or the palace, is the same, and requires that what we do should be done quickly, as the opportunity of affording relief is commonly of short duration. In the journey through life, which is short at best, fellow-travellers should never allow themselves to reach the end of it without embracing many opportunities of making each other comfortable in times of sickness, for this is the lot of man, like infancy and old age.

There is one important principle in the practice of medicine, as well settled by observation and experiment as anything in the philosophy of Newton, which should be as well understood at the present day, by nurses and people in general, as by physicians. It is the effect of heat and cold, and other stimulants and anti-stimulants, upon inflammatory diseases. Heat quickens the circulation of the blood, and cold retards it. In inflammatory diseases the blood already circulates too fast, and its force is one, if not the sole, cause of the continuance of the disease. In sore throat, in croup, in pleurisy, in peripneumony, in inflamed eyes, in brain fever, in small pox, in colds, and in every other inflammation, whether local or general, the application of heat only adds more intensity to the flame which is consuming the body. This observation not only refers to the application of simple heat, but to all those articles of medicine, food, and drink, which generate heat or produce warmth, such as hot-drops, spirits, camphor, heating teas, peppermint, tanzy, ginger, pepper, mustard, animal food, and rube-facients.

The application of cold to the body, by breathing cold air and the immersion in cold water, or exposing the surface in any way, moderates the circulation of the blood and produces an anti-inflammatory effect. An inflammation may be subdued by the abstrac-

tion of heat alone, or which is the same thing, the application of cold.

Antimony, ipecac., sal nitre, salts, and lobelia in small doses, and cathartics in general, blood-letting, and all medicines which nauseate without vomiting, retard and lessen the rapidity of the pulse and circulation, and subdue inflammation. Hot rooms and a hot atmosphere or climate increase inflammation. In inflammations of the throat and lungs, however,—such as sore throats, lung fever, croup, pleurisy, peripneumony, consumption, asthma, &c., a moderately warm, dry air is the most favorable to a cure, as the contact of very cold air to the raw surface of the mucous membrane of the throat and lungs is found to increase the inflammation.

Hot rooms are unfavorable to the recovery of women in child-bed. The air of the room, in such cases, should not be higher than sixty-six or sixty-seven by the thermometer. A higher degree of heat operates, in general, to quicken the pulse and increase the circulation, or produce the inflammatory state. To some diseases, a summer-heat, or a heat of seventy-five by the thermometer, is congenial, but to acute inflammatory diseases it is unfavorable.

If the art of nursing is well understood, much may be done in fevers and inflammatory diseases by a discriminating adjustment of the heat of the sick-room, and by the application of warm or cold water, as the case may require.

Too much dosing is exceedingly pernicious; the nurse must always look out for this error. In most diseases, the appetite is suspended, and the system is incapable of nourishment; the vital strength, therefore, is quickly spent from this cause alone, so that much less medicine can be borne with impunity. This observation is especially applicable to the diseases of children.

Cleanliness is a cardinal principle in nursing. Clean clothes, clean beds, clean vessels and utensils, and a clean, well-aired room, devoid of offensive smells, contribute not only to the comfort of the sick, but to the prevention and cure of diseases.

The sick are in general feeble in mind, incapable of much conversation themselves, and seriously fatigued and injured by the conversation of those around them. A talkative nurse can hardly be said to be a good one. Even physicians sometimes err in this respect. We have many a time seen a patient fairly exhausted by the imprudent volubility of the medical attendant.

A dry air, as well as dry clothing, must always be obtained in cases of sickness, if possible; but a close, confined air is to be avoided.

Cool air is favorable to sleep, and hot air produces wakefulness.

It is generally thought to be a very important affair that the patient should be pleased with the nurse and with the physician. This is well enough; but we apprehend that it has but very little to do with the right operation of remedies, or the restoration

of the sick. We should scarcely think of selecting a mechanic or an artist upon any such principle. It is skill that the patient should value, and not the looks and manners of the person who possesses it. For, what can the manners or appearance of a nurse or physician have to do with the operation of a dose of salts, the abstraction of blood, or the agents employed to raise a sweat, or strengthen the tone of the stomach? Can the suavity of a nurse or a physician have any agency in curing an inflammation of the eyes, or a swelling of the great-toe joint? In a disease of the nerves, where the mind is to be wrought upon, it may be an object to please the fancy in the selection of a nurse or medical attendant who has the art of pleasing; but, otherwise, it does not appear to us to be an object of much importance. If a person wishes to be cured, he must rely upon the right selection and application of remedies.

A nurse should have a thorough acquaintance with the nature and operation of herbs and common plants. Many diseases may be ameliorated and cured by the use of simple means. Often, where potent remedies have failed, milder means have succeeded.

Lastly, the nurse should, in general, follow the directions of the physician, unless there is some special reason for the contrary. The physician is always the best judge of his own way and means of curing a disease. If, however, the physician is very young and inexperienced, and the nurse old and experienced, more liberty may be used.

NUTMEG.—The tree which produces the nutmeg grows in the East. Although mostly used as a spice, the nutmeg is one of the best carminatives, stomachics, and astringents in use. To operate medicinally, it should be taken in a dose of ten or twenty grains, or half a tea-spoonful of the powder. It may also be infused in wine or brandy. Children may take from one to five grains. In wind colic, bowel complaints, and dyspepsia, it is an efficacious medicine. It warms the stomach, quiets the bowels, and invigorates the system. In case of vomiting and hiccoughs, no popular medicine produces a better or more certain effect. By distillation the nutmeg yields an essential oil, possessing the same properties. In chronic dysenteries and diarrhoeas, an infusion of nutmeg in brandy or wine, or taken in powder, will be found of the greatest service. It is very much of a nervine, and a useful medicine in hypochondrism. In a large dose it produces some of the effects of opium,—delirium, stupor, and congestion of the brain.

NUX VOMICA—*Strychnos Nux Vomica*.—This medicine is the seed or nut of a tree which grows in the East Indies. It is a deadly poison; but, in small doses, is an efficacious narcotic. The nut or seed is flat, round, about an inch broad, and near a quarter of an inch thick, with a prominence in the middle, on both sides, of a gray color, covered with a kind of woolly matter, and, internally, hard and tough like horn. The taste is intensely bitter, and without much smell. It consists of a gummy matter, easily

dissolved in spirits. Its virtue resides in a chemical principle, called strychnine.

The proper dose of the nux vomica is four grains, given three or four times a day, or two grains of the extract may be given as a dose. It has been used to cure the palsy, and other nervous affections. In the cure of rheumatism and gout it has of late become much celebrated. It has been employed in the cure of insanity, hypochondrism, hysterics, and dysentery. The strychnine has now almost entirely superseded the use of the nux vomica in substance.

NYCTALOPIA.—Night blindness.

NYMPHOMANIA.—See *Inordinate Lust*.

O.

OAK BARK.—The white-oak bark is one of the best astringents in use. In bleedings from the stomach, bowels, lungs, and womb, a tea made of it, and taken to the amount of a gill in a day, in table-spoonful doses, has a great effect in restraining them. It is strengthening, and prevents putrefaction. The singular effect which it has upon raw hides in converting them into leather, or tanning them, shows that it must operate medicinally upon the living system, the membranes, digestive organs, and blood-vessels.

In cases of gangrene, in the form of a decoction or poultice, it has been attended with the happiest effect. As a wash for old sores and ulcers, it is hardly surpassed by any application. It contains the principle of tannin, upon which its efficacy probably depends. In the fluor albus of females, boiled in water, and introduced into the vagina with the syringe, it restrains the complaint and often removes it.

ODONTALGIA.—Toothache.—See *Toothache*.

CEDEMATOUS SWELLINGS.—Accumulations of water between the skin and flesh, and in the cellular membrane generally. They make their appearance first in the feet and legs, and gradually extend upwards. They are commonly called dropsical swellings. The remedies are pointed out under the head of dropsy.

ŒSOPHAGUS.—The Meat-pipe.—The passage to the stomach.

OIL, ESSENTIAL OR VOLATILE.—The volatile or essential oils are obtained by distillation, like distilled waters. Some are lighter and others heavier than water. A property common to all is pungency and heat. Most of them are carminative, cordial, and stomachic. Some, like juniper, are diuretic; others, like savin, are promoters of the uterine secretion. Some, again, like rosemary, are nervine; and others, like pennyroyal, excite sweat. The oil of wormwood is a bitter and a tonic. The most common

are cinnamon, peppermint, tansy, anise, caraway, juniper, savin, amber, lavender, wormwood, and cloves. To render them suitable for medicine, or to be taken into the stomach, they should be converted into essences, that is, dissolved in the spirit of wine. They are sometimes, however, taken on sugar, which neutralizes their heat and pungency.

Nearly all of the essential oils dissolve in about four times their own quantity of spirits of wine.

OIL OF CLOVES.—This oil is obtained by distillation from the dried, unexpanded flowers of the clove-tree, which grows in the Molucca islands. It has a burning, pungent taste, and an aromatic smell. It is highly stimulant, and one of the best applications in use to quiet the toothache. A drop or two is applied to a dossil of lint, and placed in the cavity of the tooth.

OIL OF VITRIOL—Sulphuric Acid.—It is made by burning sulphur or brimstone in the air, or in a close leaden chamber, with saltpetre. When brimstone is burned in the air, as everybody knows, a strong, suffocating, white smoke arises, which is the real essence of oil of vitriol or sulphuric acid. This white smoke or fume, when absorbed by water, becomes oil of vitriol. Water rapidly absorbs the fume and holds it in solution. This is the acid of which the elixir of vitriol is made, so often used as a refrigerent and tonic in hemorrhages, protracted fevers, dyspepsia, and a variety of other diseases of weakness.

It makes an agreeable sour drink and an excellent tonic.

The oil of vitriol is a violent caustic. Taken into the stomach in its undiluted state, it is a deadly poison. It unites with the alkalies and metals, and forms a variety of neutral salts, such as Glauber's salts, vitriolated tartar, Epsom salts, blue vitriol, and green vitriol.

Add, by degrees, eight ounces of water to one ounce of oil of vitriol, in a glass bottle. The water must be added slowly, or the heat which is generated will burst the bottle. Of the acid thus diluted, ten drops in half a tumbler of water is a common dose.

This is a most excellent medicine to induce an appetite and strengthen the stomach.

OINTMENT—Unguentum.—The chief ingredient in ointments and cerates is oil or lard. One of the most delicate and simple ointments is made by melting together white or yellow wax with sweet oil, in the proportion of five ounces of the oil to two of the wax.

Another excellent ointment is made by melting together two parts of spermaceti, one part of olive or sweet oil, and one part of white wax.

The citrine ointment, an excellent article for diseases of the skin, is made of one part of quicksilver, two parts of nitrous acid, three parts of lard, and nine parts of sweet oil. The quicksilver is first dissolved in the nitrous acid, by digestion in a sand-bath, and the lard and oil, after being melted together, added, while the

solution is hot. Stir them briskly together in a glass or wedge-wood mortar, so as to form the whole into an ointment.

Ointments and salves can be made hard or soft by adding more or less wax, spermaceti, or resin.

OINTMENT OF MERCURY—Mercurial Ointment.—See *Mercurial Ointment*.

OINTMENT OF RED PRECIPITATE.—Take of red precipitate, or red oxide of quicksilver, one part, and hog's lard eight parts. Rub them well together in a mortar, and preserve the ointment in an earthen covered jar. This is an excellent ointment with which to dress indolent and ill-conditioned sores. It is stimulating and healing. It is sometimes applied, in small quantity, to chronic sore eyelids and blotched face.

OINTMENT OF SUGAR OF LEAD—Saturnine Ointment.—Take of simple ointment, made of bees'-wax and sweet oil, two ounces and a half; sugar of lead, in fine powder, one drachm, and mix them well together. This is an exceedingly cooling ointment, often applied to slight burns and inflammations. It operates very much like a solution of sugar of lead.

OINTMENT OF VERDIGRIS.—Take of basilicon ointment two ounces, verdigris one drachm, and rub them well together in a marble mortar.

This ointment is applied to destroy proud flesh, and to improve the condition of running ulcers.

OLIVE OIL—Sweet Oil.—This oil is obtained from the fruit of the olive-tree, which grows in the south of Europe. The olives are a valuable and rich article of food. The oil is laxative, expectorant, and demulcent. In the jaundice and biliary affections, the sweet oil is a capital medicine. The dose is from half a gill to half a pint.

In case of corrosive substances and poisons taken into the stomach, there is no remedy more effectual in neutralizing them than the sweet oil. It is always safe, innocent, and soothing. It enters into the composition of a great variety of liniments, ointments, salves, and plasters. It has also been employed with great advantage as an unction to the skin, in times of the plague and other contagious diseases. As an article of food it is thought to be preferable to animal fat; people of weak stomachs, however, should avoid the use of it.

OMENTUM—The Apron, or Caul.—The caul is formed by a duplicature of the membrane called the peritoneum. It is a loose, fatty-looking membrane, which lies upon the surface of the bowels, and is attached to the stomach. It often descends into the pelvis. Its use appears to be to lubricate and defend the bowels. In fat people, the omentum or caul is literally loaded with fat.

ONANISM—Masturbation.—This vice is almost sure to end in a greater or less derangement of the nervous system. The most effectual correctors of it are hard, constant labor, and early marriage. A vegetable diet and cold bathing sometimes assist in the cure. See *Inordinate Lust*.

OPIUM.—Opium is the inspissated juice of the white poppy. The juice is a white, milky fluid, which oozes from the leaves, capsules, and stalks, when they are slightly cut.

The white poppy has often been made to grow in this country, but hitherto the opium which has been produced from it is of an inferior quality.

The juice of the poppy, exposed for a few days to the sun and air, thickens into a stiff, tough mass, which is opium. The best kind of opium comes from Turkey. It has a peculiar, heavy, disagreeable smell, and a bitter, nauseous, acrid, and warming taste. It is of a dark-brown color, and, when reduced to powder, yellow. It is compact, solid, tenacious, and when broken, has a shining fracture. The best part of it comes in flat pieces, covered with large leaves, and reddish capsules of a species of *rumex*, probably used in packing it. The round masses, without the capsules adhering to them, are of an inferior quality.

The East India opium is soft, ductile, and about the consistency of tar. It has something of a smoky smell, a darker color, and a more nauseous and bitter taste. It is supposed to be about half the strength of the Turkey opium.

Opium is a powerful narcotic or inducer of sleep, and an astringent. No medicine has ever been discovered at all comparable to it in moderating and relieving pain, or in promoting sleep. It is soluble in alcohol, wine, vinegar, and water, though the two last afford but weak solutions of it. Its sedative virtue resides in a principle called morphia or morphine.

A grain or two of opium, taken into the stomach, produces a remarkable composure of the mind, succeeded by a certain degree of languor and drowsiness; the pulse becomes slower, fuller, and softer; all the secretions are, in the first instance, diminished; the motion of the bowels is retarded; the thirst increased, and the mouth dried. The heat of the body appears to be increased, and the senses rendered dull. In the course of three or four hours a perspiration is produced. The narcotic effect of a dose of opium lasts about eight hours; and in general a full dose of it cannot be given with safety oftener than three times in twenty-four hours. In cases of great pain and distress, however, it can be given much oftener and in larger doses than in others.

In too large a dose it produces an apoplectic state and death.

The medium dose of opium is one grain, given in the form of a pill. It is often, however, given in doses of from one to three grains. It operates differently upon different individuals. Upon some, half a grain will have as much effect as a grain or a grain and a half upon others. In almost all diseases attended with pain, distress, and loss of sleep, opium is more or less used. In the commencement of inflammatory diseases, it is deemed inadmissible, unless its use becomes unavoidable from the urgency of the pain and the entire want of sleep. In dysentery, diarrhoea, cholera morbus, colic, epilepsy, hysterics, locked jaw, spasms, small pox, dyspepsia, hypochondrism, gravel, the passage of gall-stones, men-

orrhagia, asthma, consumption, burns, wounds, fractures, dislocations, toothache, tic douloureux, and threatened abortion, opium, in one form or another, is found of the most essential service. In dropsy of the brain and brain fever, opium is commonly injurious. The two principal forms in which it is used are laudanum and paregoric. See *Tincture of Opium* or *Laudanum*.

OPHTHALMIA—Inflammation of the Eyes.—See *Inflammation of the Eyes*.

ORGAN.—In the animal system, this term means a structure which produces some peculiar fluid, or performs a peculiar function, as the liver, stomach, lungs, heart, brain, and the senses of seeing, hearing, etc.

OS.—A bone, a mouth.

OTITIS—Inflammation of the Ear—Earache.—See *Earache*.

OVARIA.—The ovaria are two flat, oval bodies, about an inch in length, and half an inch in breadth and thickness. They are appended to the uterus by means of two canals or ducts, called the fallopian tubes. The insides of the ovaria are filled with little soft eggs or bladders of lymph, which are supposed to have an important agency in conception. When animals are deprived of the ovaria, they become incapable of producing young. They extend about an inch from behind the fundus of the uterus. The fetus, by some, is supposed to commence in the ovaria, and to descend into the uterus. Others suppose them to secrete a peculiar kind of fluid, which contributes to the formation of the new being.

OXIDE OF IRON—Iron Rust—Carbonate of Iron.—The red rust which collects on iron by exposure to air and moisture, if scraped off and ground to a powder, forms the carbonate of iron. The carbonic acid, together with oxygen, is absorbed from the atmosphere and combines with the iron. Its dose is from ten to twenty grains. It is an agreeable tonic. It strengthens the stomach and system generally, without stimulation.

OXIDE OF ZINC—Flowers of Zinc.—The oxide of zinc is a white powder, formed by a combustion of the metal in a crucible. It is insipid, insoluble, and infusible.

It is applied to running sores and watery humors as an absorbent and detergent. The fine powder is sprinkled over them and renewed every day.

It has also been given internally, in cases of epilepsy and spasms. The dose, in these cases, is from one to seven or eight grains. Mixed with twice its weight of hogs' lard, it makes an excellent ointment for sore nipples and chapped hands. It is cooling and astringent.

OXYGEN GAS.—An elementary air. It is, like the atmosphere, an elastic, invisible fluid. It composes twenty-one parts in a hundred, by measure, of the air. Without it no animal can live, and no combustible body can burn. When a lamp burns, oxygen is separated from the air and combined with the carbon and hydrogen. It is oxygen which causes metals to rust, and sweet liquids to become sour. It is obtained from saltpetre, manganese, and

several other substances, by the application of a strong heat. This gas has relieved the asthma. It is disengaged by wetting a piece of paper with a solution of saltpetre, and burning it in the room with the patient.

OZÆNA.—This disease is an ulcer in the nose, which discharges a fetid, purulent matter, and results, in most cases, from the venereal disease and the scrofula. It begins with swelling of the nostrils, insomuch that the passages are nearly or entirely closed up. A caries of the bone is often the consequence. There is, at first, a discharge of mucus, followed by the formation of pus, attended with sneezing, and a trace of blood. The ulceration in some cases will extend to the outside of the nose and the cheek.

A decoction of wild indigo root, snuffed up the nose several times a day, is a good remedy in this disease. Solutions of myrrh, alum, and a strong tea of the white poppy, used in the same way, are beneficial. Calomel, in small quantity, may be taken as a snuff. A tea made of the white-oak bark is an excellent wash. Where the disease depends upon a scrofulous or venereal taint, these affections must be cured before anything can be done for the ozæna.

P.

PALATE—Roof of the Mouth.—In common language, it means the uvula, a small, round, fleshy process, which hangs in front of the throat from the roof of the mouth. It is composed of a small, round, wormlike muscle, and the common membrane of the mouth. The fleshy palate becomes lengthened by inflammation and relaxation, insomuch that both the speech and swallowing are impeded; in which case, it is sometimes amputated.

PALM OIL.—The palm-tree, whose fruit yields the palm oil, grows in the West Indies. The oil is of an orange color, and about as thick as lard. It has a strong, agreeable odor, but very little taste. It is an excellent application to stiff joints and old rheumatic swellings. A small mass, of the bulk of a nutmeg, may be rubbed in every night. It mitigates pain, and reduces tumors. It is often used to cure chilblains, cramps, and other similar affections. With camphor and sal ammoniac, it forms valuable liniments for indolent tumors and swelled joints.

PALPITATION.—This disorder is an extraordinary beating of the heart. In some instances, the heart will appear almost to jump out of the mouth from the violence of its action. In running very fast, and for some distance, the heart will beat inordinately, and the same effect produced which we mean by palpitation; but this is not, in ordinary, accounted a disease. Horses will have a vehement palpitation of the heart at the end of a race, which will shake the whole body for a long time. All people in a state of fear or terror will have a violent palpitation of the heart;

but as the cause is a common one, and the effect, in a measure, habitual, and as no apparent evil arises from it, it is not regarded as a disease. Imaginary fear will produce this affection of the heart, as well as if the passion were well founded; and we imagine that most cases of the palpitation of the heart arise from imaginary fear, such as the fear of instant death, or some other great evil. People will often become frightened in their dreams, and awake with a violent palpitation of the heart. They forget the cause, and, thinking only of the effect, become alarmed unnecessarily.

There are various organic affections of the heart which produce this affection, such as dropsy, aneurism, and ossification of the valves; but the most common cause is a delicate, weak state of the nerves. When the nerves become weak and delicate, the emotions, passions, instincts, and propensities of the mind are easily excited, as well as the functions of the body, and no function more so than that of the heart. Indeed, the heart is almost a complete index of the state of the nervous system. Palpitation seems to be produced by a sudden rush of the venous blood into the heart, by which it becomes distended, and excited to action in order to relieve itself of the load. The heart is overloaded with blood. It is probable that in the palpitation of the heart which arises from nervous affections, the spleen suddenly transfers a large quantity of blood from the arteries to the veins, and thus overloads the heart. This effect the spleen is able to produce, by the size of its blood-vessels, and its liability, in common with the other organs of the body, to be controlled by the affections of the mind. Perhaps this is what the ancients meant by the disease called the spleen.

The method of curing the palpitation is no more nor less than curing the diseased state of the nerves and the local affections of the heart which produce it. Whatever tends to strengthen the nervous system and to confirm the general health, or to remove the local affections of the heart, will cure the palpitation. The disease is painful, distressing, and often alarming, but is not, in itself, a dangerous affection. It is an important point to know the cause of it, and, knowing this, to moderate or remove it. If the cause is fear, arising from some sudden apprehension of death or other evils, we may be assured that the palpitation will subside in the same way as when the affection arises from fear in general, or from over-exercise of the body.

The best medicine is a few drops of laudanum, a tea-spoonful or two of paregoric, or Hoffman's anodyne. Thirty drops of the water of ammonia, or a tea-spoonful of the spirits of camphor or ether, will moderate the affection. A large draught of poppy tea will have the same effect. If it proceeds from an overloaded and distressed stomach,—one of the most common causes,—an emetic must be given, followed by a dose of castor-oil or salts. The quinine, rust of iron, and the chalybeate spring waters should be used to confirm the strength of the nervous system.

PALSY—Paralysis.—The palsy, in ordinary, results from apo-

plexy. We have seen it caused by epilepsy, and we think it may be produced by insanity. Some writers conceive that it is always preceded by apoplexy, but we are certain that it sometimes follows epilepsy, that it often affects insane people, and sometimes happens without any apoplectic symptoms whatever. Even allowing the cause of palsy to be a pressure upon the brain in every instance, it by no means follows that it must be preceded by apoplexy. We think it to be a distinct disease from apoplexy, although both are diseases of the nervous system. The apoplexy often appears and disappears, in the same person, for two or three times in succession, without betraying any more symptoms of the palsy than a fit of epilepsy, hysterics, or insanity. Some consider apoplexy to be the acute stage of palsy. Dissections, of late years, have placed it almost beyond a doubt that both apoplexy and palsy are caused by hemorrhage or bleeding from the blood-vessels of the brain. In nearly four hundred fatal cases of palsy, Mr. Andral, a French physician of eminence, found clots of blood in the brain, varying in size from that of a pea to the size of a hen's egg. In different individuals, the coagulated blood was found in different parts of the brain. It is a well-established fact that any kind of pressure upon the brain will produce a loss of sense and motion. An effusion of water in the brain is no doubt a cause of apoplexy and palsy. The growth of tumors and the formation of abscesses are also productive of the same effects. Blows and wounds are often the causes of palsy.

When a person sits for some time with one leg crossed over the other, both the feeling and the voluntary power are for a time lost in one or the other of the legs. We say, the limb is numb. It is in fact the numb palsy as long as it lasts. The pressure upon the nerves of the thigh or ham has destroyed the feeling of the limb below, and perhaps the motion. Every one must have often lost the sensation and the motion of one leg for a considerable time from a pressure of the nerves in this way. By hitting the elbow against some hard body, the same numbness is produced in the forearm. If a nerve is taken up and tied with a ligature, it destroys all feeling and power of motion in the parts to which it extends, below the ligature. These facts may serve to give us some little insight into the nature of the palsy.

The palsy affects the body in various ways. Sometimes it destroys the power of moving the muscles of one side of the body, and in other instances the whole of the lower part of the body. When the muscles of one side of the body, up and down, are palsied, it is called hemiplegia; and when the lower half of the body, that is, both legs and a part of the trunk, is palsied, it is called paraplegia. The hemiplegia is a much more recoverable disease than the paraplegia. In some instances, only one arm, or leg, or part of the face, will be palsied. Such cases are much more recoverable than either hemiplegia or paraplegia. Indeed, the chance of recovery is somewhat in proportion to the extent of the palsy; if only a few of the muscles are palsied, the chance of recovery is

great ; and if a large number of them are palsied, the chance is small. Young people recover much oftener from the disease than old people. Complete recoveries rarely take place ; partial recoveries almost always.

When a palsy comes on, the person is rarely ever conscious of it. The first notice the patient has of it is the loss of motion and of sensation in the part affected. There is no pain, soreness, sense of heat, swelling, distress, or redness, as in other diseases, to mark the onset of the disorder. The palsy is the opposite of disease, in the literal sense of the word ; it is the rest or the partial death of the affected muscles. The nerve or nerves are nevertheless far from being dead. No decomposition of the nerves or muscles ever takes place in the case of palsy. The circulation of the blood goes on in the palsied parts, and there is none of the common evidences of dissolution. Putrefaction is no more likely to take place in a palsied limb than in a well one." The true nature of the disease is wrapped in mystery. There is a partial or entire loss of motion, and a partial or entire loss of feeling, in the palsied part, and this is pretty much all that we know about it. In most cases the loss of feeling is but partial, and in some instances the sensibility of the palsied part is not diminished at all. After a complete palsy, the affected parts appear to possess the same kind of life which exists in the hair and nails.

It was not known to the older writers, even to Cullen, Buchan, and Fordyce, that the nerves of sensation and the nerves of motion are distinct systems, although often enclosed in the same sheath. This discovery was made by Mr. Charles Bell, and fully explains the reason why the motion of the muscles may be lost, and still the feeling of the part be retained, and also why the feeling may be destroyed, and the power of motion retained.

Another phenomenon in the history of palsy, which puzzled Cullen and the old school of physicians to account for, was the paralytic affection of the side of the body being opposite to the side of the brain where the pressure was found, on dissection, to exist. It has, of late, been pretty clearly demonstrated that the nerves cross each other in issuing from the brain, so that the nerves of the right side of the body really come from the left side of the brain, and the nerves of the left side of the body come from the right half of the brain. This fact will account for the palsy of the side of the body opposite to the half of the brain which happens to be injured or pressed, as the nerves of the palsied side really come from that part of the brain upon which the pressure is made.

In the palsy of one side, the power of speech is sometimes lost, and in most cases it is more or less impaired. It is not a little singular that one half of the tongue will be palsied while the other half will remain sound. In putting out the tongue the palsied side will lop down, which gives it a tremulous motion. One corner of the mouth is often drawn down, and the command of the eyelids of the same side lost. The features of the face

will be altered, and, in consequence of the affection of the mouth, a palsied person is apt to slaver or drivel, and finds it difficult to swallow liquids.

The mental faculties are always more or less affected, particularly the memory. In some instances, the powers of the mind are wholly destroyed. In paraplegia, or when the lower half of the body is palsied, the person can neither retain the urine nor the fæces, but both are discharged involuntarily. The use of both legs is lost, and the person is left without the power of walking, or support.

Painters are said to be peculiarly liable to palsy, particularly of the hands and arms. A too great fulness of the blood-vessels, from over-feeding, is supposed to be a frequent cause of the disease. All great efforts of the mind and of the body produce this disease. Excitement of all kinds, by driving the blood to the head, endangers the blood-vessels of that organ, and prepares them for a rupture. No doubt but a bare fulness of the blood-vessels of the head may cause the disease. It appears to us, however, that, in most cases of palsy, the brain is in an exhausted state, from over-action of some kind or other; and that its blood-vessels, being weakened or rendered thin and emaciated, are easily ruptured on any considerable agitation of the mind or body, and hence an effusion of blood. It is more difficult to account for partial palsies, where there is no visible evidence of an affection of the brain. But, perhaps, these may be owing to some little lesions of the minute blood-vessels which penetrate the nerves, and to an escape of blood.

We have often seen palsies of the face, and other partial palsies, recover, but the recoveries have commonly been slow.

Domestic Remedies. — In a fit or stroke of the palsy, the person should be placed in a room of moderate temperature, or a temperature of about sixty-eight degrees by the thermometer. If there is a loss of sense and motion, or if the body should be very much convulsed, cold water should be dashed upon the face and head, and every part of the clothing loosened or removed which may impede the circulation of the blood. As the patient, in this state, is commonly unable to swallow, an injection composed of salt and water, made very strong, should be immediately given, and repeated every hour until the patient is able to swallow. In case the stroke or fit happens just after a full meal, or eating anything indigestible, a gentle emetic of ipecac. or of lobelia should be given, followed by a dose of castor-oil, aloetic pills, or some other active physic. As soon as the bowels and stomach are unloaded, warm gruel or pennyroyal tea should be given for drink, to which should be added a tea-spoonful of tincture of cayenne. The whole surface should be washed over with castile soap and tepid water, and blisters applied about the arms or upon the nape of the neck. The food, if any can be taken, should consist of water porridge, warm milk and water, chicken broth made with rice, rye pudding, boiled rice, and soaked bread. No meat should be

allowed, nor any great quantity of broth. Vegetable food lessens the force of the circulation and all the vital actions, and these are great objects to accomplish in all cases where lesions of the blood-vessels occur and hemorrhage is apprehended. When a person lies upon his back with disease, vegetable food is always sufficiently nutritious to support and replenish the system. We conceive no point to be more important, in the cure of palsy, than to live upon a vegetable diet. A vegetable diet softens the pulse, relaxes the rigid tone of the blood-vessels and of the heart, and promotes all the secretions. It lessens the heat of the body, and increases the activity of the bowels. It favors sleep and a composure of the nervous system. Animal food, on the other hand, hardens the pulse, increases the tone of the animal fibres, retards the secretions, increases the heat of the body, and disturbs the function of the nervous system. When the force of the pulse is increased, and the circulation of the blood hastened, the oxygenation of the blood is increased, and the brain thereby becomes over-excited, as oxygen is a powerful stimulus. High living, which causes a forcible circulation and an excitement of the blood, is a frequent cause of the palsy; and to cure the disease and prevent a relapse, an opposite course must be pursued. We do not mean that the system must be reduced very much, but that it must be brought to the standard of sound health. Both emaciation of the muscular and nervous fibres, and the plenitude of muscular and nervous strength, in different ways, induce the palsy.

The drink in this disease should be cold water, or sweetened water, lemonade, soda powders, and chocolate.

In some instances of palsy, where it commences with apoplectic symptoms, there will be more or less fever; these symptoms must be obviated like those of fever in general. In such cases a dose of physic should be administered every day. By thus draining the bowels, the pressure upon the brain is lessened, and the nerves prepared to resume their proper function.

All stimulating things should be avoided, especially all alcoholic liquors. In this form of the complaint, mustard, red pepper, guaiacum, stimulating essences and oils, and medicines to excite the nervous action, commonly fail in their object and only produce mischief. Gentle friction with the hand, or with a flesh-brush, and riding in a carriage, where it can be borne, are very serviceable. Both cold and warm bathing are found, in general, prejudicial. The skin should simply be kept clean by soap and tepid water. Being in the open air as much as possible, and frequent efforts to use the palsied limb or muscles, are of great advantage to the disease.

Professional Remedies. — Depletion, in some way or other, is often needed in this disease. Cathartics are always safe; diuretics and the antimonial sudorifics are commonly useful and harmless. Blood-letting is the most potent mean of depletion, and requires the most judgment in its application. With respect to the propriety of bleeding, Dr. Dewees observes, that, "The pulse will

generally conduct us safely in such cases, if it be properly consulted, together with the other phenomena that the system presents at the same time. If the pulse be full and slow, or unusually hard and frequent, — if there be heat, or a pricking sensation in the skin, headache, or drowsiness, flushed cheeks, high-colored and scanty urine, and white tongue, — the loss of a few ounces of blood is distinctly indicated, either by the lancet, or by cups or leeches, — if the pulse be hard and frequent, by the lancet, — if sluggish, by cups or leeches to the back of the neck." We can give no better advice than this in the choice of cases where bleeding is indicated. The bowels should be drained every day by a dose of salts or aloetic pills, until amendment becomes perceptible, or the case becomes so obstinate as to despair of a cure. If the bowels become very torpid, more powerful cathartics should be used, such as calomel and jalap, the Croton oil, spirits of turpentine, or Lee's pills. Some palsies have been cured by electricity and galvanism applied daily, for many days in succession. But where these agents perceptibly increase the force of the heart, and excite feverish sensations, they should be omitted. The nitrous oxide gas has been used in some cases with advantage. We think, however, that it should not be used in any recent case. Blisters have generally been found to help the disorder.

The strychnia has been highly recommended by some, while others as strongly disapprove of its use. In most cases of palsy, it has taken time to effect a cure. A vegetable diet; as much exercise in the sun and open air as can be comfortably borne; freedom from all excitement of the mind; and an avoidance of cold and heat, and the changes of the weather, are the cardinal conditions of a cure. A residence at the springs, and a course of the waters, have, in many instances, hastened recovery. Both the chalybeate and the cathartic waters have been found extremely serviceable. The sulphur springs should be tried. Quinine, iodine, and the mineral acids, will in many cases assist in the process of cure.

There is a shaking palsy, well known to people in general, which is hardly ever regarded as a disease, but which is a great misfortune and exceedingly annoying. It is mostly confined to people advanced in life. Like the impairment of sight in consequence of age, it is passed over as incurable. It is, however, much worse sometimes than at others, and at such times should receive the same treatment which we have advised for the disease in general.

PANCREAS. — This organ, which, in its shape and external appearance, resembles a dog's tongue, is situated in the epigastric region under the stomach, and secretes a fluid which resembles the saliva. The innumerable small glands, which compose its inner surface, excrete the pancreatic juice by as many little ducts, which unite and form one large duct, called the pancreatic duct, which enters that portion of the bowels denominated the duodenum. The pancreatic juice is supposed to act an important part

in the conversion of the chyme into chyle. The quantity of fluid which it secretes and pours into the bowels is considerable. What its special chemical action is, has never been ascertained. It is an organ found in almost all animals, and, though small, is unquestionably essential to the life of man.

PAPILLÆ. — This term is used in general to signify the fine terminations of the nerves upon the skin and tongue. The skin, viewed through a microscope, is composed of innumerable little indentations and conical eminences. These little nodules or eminences are called papillæ, because they resemble the nipple in shape, though infinitely smaller in size.

PARACENTESIS. — The operation of tapping the abdomen in the dropsy. It is performed by an instrument called a trocar, consisting of a small tube to which a sharp instrument is adapted. The trocar is pushed into the cavity containing water, and the cutting instrument withdrawn, that the water may run off through the tube. We have seen sixteen quarts of water drawn from the abdomen, at one time, by this operation.

PARACUSIS. — Deafness.

PARALYSIS — Palsy. — See *Palsy*.

PARAPHIMOSIS. — See *Phimosis*.

PAREGORIC. — To make the elixir paregoric, take one drachm of opium, one drachm of benzoic acid, two scruples of camphor, one drachm of the volatile oil of anise-seed, and two pounds of diluted alcohol, or new rum. Let the whole stand for ten days, and strain the liquor through paper or a piece of fine linen. The dose for children is from one to twenty drops. The dose for adults is from a tea-spoonful to a table-spoonful. A table-spoonful contains about a grain of opium. It is an excellent medicine for the asthma and coughs. It can be given in almost any disease requiring an anodyne. Paregoric is an opiate extremely well suited to the condition of young children.

PARENCHYMA. — This is the fundamental substance of the organs, in which the vessels and nerves are imbedded, and by which they are connected together. The structure is spongy and cellular.

PARIETAL BONES. — Two arched and nearly square bones, which compose the upper and lateral parts of the skull. One bone is situated on each side of the cranium.

PAROXYSM. — A great increase or aggravation of the symptoms of a disease. The pains of the gout and the hot stage of fevers are called paroxysms. Epileptic fits are composed of intervals and paroxysms. A violent pain in the teeth is called a paroxysm of the toothache.

PARSLEY. — The root and seeds of the parsley are extremely serviceable in stoppages of the water, and in dropsy. To increase the flow of the water, an infusion is made of the roots, or seeds, and drank freely through the day. Says Dr. Chapman of Philadelphia, "No diuretic is more valuable than this in some cases."

PATELLA. — The knee-pan.

PEARLASHES — Impure Carbonate of Potash. — Pearlash is made by liquifying crude potash in a crucible with an intense heat, and by burning it over in a reverberatory furnace. It is acrid and caustic. It is a good corrector of acid in the stomach, and increases the urinary secretion. The common dose of pearlash is from two or three grains to a scruple. It may be dissolved in water and mixed with mucilage of gum arabic. Pearlash is a good remedy for whooping cough. In cases of gravel and stone in the bladder, this alkaline salt has been found of excellent service. It is also a common domestic medicine among dyspeptic people.

PELVIS. — The cavity below the belly, formed by four bones, the two ossa innominata, the os sacrum, and the os coccygis. It contains the bladder, the rectum, and, in females, the uterus. It is sometimes called the basin, from its having a brim, and otherwise resembling that vessel. In females this cavity is much larger than in males; in them it is shallow and wide; in males it is narrow, and composed of stouter bones. In nothing is the female form more distinguishable from that of the male than in the breadth and capacity of the pelvis. This is a matter of necessity, from its containing an extra organ.

PENNYROYAL — *Mentha Pulegium*. — This is one of the best and most common domestic remedies. A strong infusion or tea of it, drank hot, opens the pores, raises a sweat, and loosens the bowels. Like the peppermint, it is a stimulant and carminative; it quickens the circulation and increases the heat. In cases of obstruction of the menses, the pennyroyal enjoys a high reputation. In the commencement of a cold, while the shivering fit is on, two or three cups of pennyroyal tea will often throw it off, by a seasonable opening of the pores.

PEPPERMINT — *Mentha Piperita*. — The peppermint is a valuable herb. The leaves have a strong aromatic smell, and a warming, pungent taste, furnishing an essential oil, which, when dissolved in alcohol, forms the essence of peppermint, a well-known stimulant and carminative in cases of wind colic, pains in the stomach, faintness, hysteric fits, and a languid circulation of the blood. It may be used in the form of a tea made of the leaves, or in that of the distilled water and essence. Fifteen or twenty drops, in half a gill of water, is a dose of the essence. The tea can be drank in large quantities. It communicates warmth to the system and invigorates the mind. In all cold disorders the peppermint tea is an appropriate medicine.

PERICARDITIS. — An inflammation of the pericardium or heart-case. See *Inflammation of the Heart*.

PERISTALTIC MOTION. — The vermicular or worm-like motion of the bowels by which they urge along their contents. It is astonishing how much this motion may be hastened or retarded by different substances and by different diseases.

PERIPNEUMONY — *Pneumonitis*. — Peripneumony is an inflammation of the parenchyma or substance of the lungs. It is

characterized by a heavy obtuse pain in the side or some part of the chest, which is increased by coughing, a full inspiration, and generally by lying on the affected side; difficult and painful respiration, particularly when in a recumbent position, or when lying on the side affected; the respiration is voluntarily shortened, to prevent the suffering occasioned by a full expansion of the lungs. There is always a cough, which is frequent, short, and moist, and like the respiration, is as much as possible suppressed by an action of the will. The lungs are oppressed by swelling and with phlegm; the face is swollen and often of a livid color; there is an expectoration of thick mucus, streaked or mixed with blood, and which frequently has the appearance of being mixed with fine brick-dust. These symptoms are ushered in by cold chills, and, more or less, general indisposition, which are followed by all the symptoms of inflammatory fever; the tongue is coated; the skin hot and usually dry; there is anxiety, thirst, and loss of appetite; the pulse is frequent and full, but not hard. In the advanced stages the pulse is sometimes very weak, soft, and irregular.

Though the above is the train of symptoms usually observed in peripneumony, it should be remarked that these symptoms are not all constant, or to be met with in every case, and that the disease may exist, manifesting very different phenomena.

It has been known to exist without any increase in the frequency or fulness of the pulse; the skin is not always preternaturally warm, nor is it uniformly dry; and the pain is sometimes, even in severe attacks, very trifling.

The position which the patient chooses varies in different cases. It is stated by some authors, that on the back, with the head and shoulders raised, is the most common, and this we think corresponds with our own observations.

The most certain means of ascertaining the existence of the disease is by auscultation, but much observation and study are necessary to qualify a person to practise this newly discovered and useful art with advantage. On applying the ear to the chest over the seat of the disease, in the first stage, the sound which is heard may be compared to that produced by sprinkling fine salt on the fire. This is called the crepitous rale.

When any part of the lung is solidified by the inflammation, neither this sound nor the natural respiratory murmur is heard; but in the parts that are healthy the latter will be heard louder than natural. This increased sound is called by Laennec puerile respiration. In the second stage, when the formation of pus-like matter begins to take place in the pulmonary tissue, the mucous rale is perceived, to a greater or less degree, which Laennec supposes is produced by the introduction of fluid into the bronchial tubes; where a large portion becomes softened, he calls it an abscess, and says that a very strong mucous or cavernous rale is perceived over its site, with pectoriloquism. "When resolution takes place before the disease has run into solidification, the crepitous rale becomes daily less perceptible, while the natural sound of respiration in-

creases and becomes gradually more distinct, and at length is heard without the least crepitous sound ; but if solidification has taken place, the cure is invariably accompanied by the return of the crepitous rale, and then, as that declines, the respiratory murmur becomes more and more distinct." The sound elicited by percussion in the first stage does not differ materially from that of health, but in the second it is dull over the affected part.

The lungs of those who have died of the disease in the first stage are found, on examination, surcharged with blood, very red, and increased in weight. In the second stage the diseased lung is softened, and much more easily broken between the thumb and finger than in the healthy state, and has nothing of the natural crepitous feel. By putting the lung into water, its weight will be found to be very much increased by its sinking immediately to the bottom of the vessel, instead of floating, as it would do in a healthy condition. When a person dies in the third stage of the complaint, the diseased lung will be found to contain a great quantity of reddish or grayish fluid, which, when the lung is cut into, oozes from numerous points.

The most general cause of this disease is the application of cold to the body, giving a check to perspiration, and determining a greater than usual flow of blood to the lungs. Other causes, such as violent exertions in singing, speaking, and playing upon wind instruments, by causing a determination to this organ, have been known to produce it. It most frequently attacks those of robust constitutions and full habits of body ; and those who have had a former attack have a greater predisposition to it than others. As would naturally be supposed when we consider what its most frequent cause is, peripneumony is a disease of cold and variable climates and seasons, though it may occur in any climate, or in any season of the year. It is said that it sometimes prevails epidemically, and endemically, that is generally, and in certain locations.

When peripneumony proves fatal in its first stage it is generally by an effusion of blood taking place in the cellular texture of the lungs, producing suffocation ; the vessels of the neck become turgid and swollen ; the face is bloated and of a purple color ; the breathing laborious ; there is great and sudden prostration ; the pulse is weak and irregular, and death ensues between the third and seventh days. It may also terminate suddenly in gangrene ; or if the attack be not very violent, or the means that have been employed have partially subdued the disease, it may terminate in suppuration.

Gangrene of the lungs will be indicated by great and sudden prostration, a livid countenance, small pulse, and fetid expectoration and breath.

When suppuration takes place, an abscess sometimes forms in the lungs, called a vomica, which, sooner or later, generally in the course of the third or fourth week, bursts, and the matter is suddenly discharged by the mouth. If the abscess be large, or unfavorably situated, the patient may die almost immediately when

this event happens ; but if it be small and favorably situated, and the strength and constitution be good, a partial or even perfect recovery may take place. Should the patient survive the crisis of one of these abscesses, he can by no means be considered out of danger as long as the cough continues, as it is not unusual for the secretion of pus to go on and keep up a constant cough, and reaccumulations repeatedly take place, until he is at length worn out with a kind of consumption.

The formation of an abscess may be known by frequent slight shiverings, an abatement of the pain, a sense of fulness in the part, laborious breathing, great debility, and the patient being able to lie on the affected side ; the pulse at the same time continuing quick, the cheeks at times flushed, and other symptoms of irregular fever being present.

It also sometimes happens, when the violence of the inflammation is not overcome in the early stage of the complaint, that it degenerates into what is called a quick consumption. There is in these cases a copious secretion and expectoration of purulent matter, indicating disorganization of the lungs. Hectic fever ensues, and the patient falls a victim to an incurable malady.

Hepatization or hardening of the lung, so that it resembles the liver, is another consequence of this disease, which may prove fatal, or from which the patient may slowly recover if the extent of the disease be small, by a gradual absorption of the hardened matter which had been deposited in the cellular substance of the lung by the inflammation.

Inasmuch as the treatment of peripneumony in its first stage is very similar to that of pleurisy, to distinguish them is not a matter of very great importance, practically considered.

It may be observed, however, that in pleurisy the pain is extremely acute, there is but little if any expectoration, the pulse is hard, and though the cough is painful, the lungs do not seem oppressed with phlegm, the cough being caused by irritation rather than by the necessity of expectorating accumulated matter ; the reverse of which conditions, it will be seen, usually obtains in peripneumony.

Rheumatism, which is frequently seated in the muscles covering the chest, and sometimes in the diaphragm and the heart, occasioning great difficulty in breathing, may be distinguished from both of those complaints by the absence of cough and expectoration, and by being attended with a greater degree of lameness in moving, by changing its location, and in some instances by its having previously affected some of the large joints or other parts of the system.

The duration of this disease is about the same as that of most other acute inflammations. When it is properly treated, and is uncomplicated, and when no untoward circumstance attend, it will seldom be protracted beyond the seventh or eighth day before symptoms of a crisis will be manifest ; but should it exceed this time and become chronic, it may be prolonged indefinitely.

Remedies.—That peripneumony is a disease that runs its course rapidly, incurable disorganization sometimes taking place in a few days, and that a cure cannot rationally be expected without prompt and efficient treatment, are facts which should never be lost sight of. No time should, therefore, be lost in the adoption of the most energetic measures to arrest its progress. It is a disease of too violent and unyielding a nature to be subdued by domestic remedies; and though some benefit may be derived from bathing the feet in hot water, hot mustard poultices to the side, warm mucilaginous drinks, frequently repeated small doses of ipecac., antimony or lobelia, the attendance of a skilful physician will be necessary in order to conduct the disease through its course with any chance of success.

The natural crisis of the disease is by expectoration; none, however, but the mildest cases are likely to be cured spontaneously. With such rapidity does it run its course, that irremediable disorganization is produced before a critical raising is established, unless aided by art.

In order to unload the engorged vessels of the lungs, and thereby restore healthy action, it is necessary to bleed freely in the early stage of the disease. The quantity of blood to be drawn must of course vary according to the age and constitution of the patient, the violence of the attack, the climate, and the season of the year. A man of ordinary strength, in a violent attack, will require at least twenty ounces to be drawn at the first operation, and if the violence of the disease be not mitigated, the operation should be repeated in six or eight hours. The first bleeding should be sufficient to produce an impression upon the system, whatever the quantity, but the subsequent ones will not require to be so copious.

Dr. Good advises eighteen or twenty ounces at least to be drawn at the first bleeding, and the operation to be repeated in twelve hours. Mackintosh, who is decidedly one of the best authorities, recommends thirty or thirty-five ounces to be drawn at the first operation. He says, "Nevertheless I am persuaded, from experience in treating the disease, and from examinations after death, that much more mischief is done by bleeding too little than by bleeding too much; but I am not an advocate for the heroic practice of taking seventy or eighty ounces of blood at one operation. The largest bleeding which I believe I ever took in my life was fifty-six ounces. In general, if the operation be properly performed, thirty or thirty-five ounces will suffice, but the patient should be seen again in the course of two or three hours." The French physicians bleed less from the arm, at least, but they use many leeches, and give the tartar emetic in large doses, as recommended by the Italians. Laennec advises only from eight to sixteen ounces, and even claims to have cured the disease without bleeding; but much allowance must be made for the climate and the national constitution.

In bleeding, however, as in giving medicine, it is idle to talk of quantities except in general terms; it is the effect which must gov-

ern the practice in both cases. While drawing blood, the effect it produces upon the pulse, the countenance, and upon the other symptoms of the disease, should be carefully observed. After two or three bleedings, and particularly if the disease has run four or five days, much caution will be necessary in repeating the operation, or the powers of life may be too much depressed and serious injury be done, by preventing a reaction of the system, which is always necessary after depletion. In this case, as well as in all others where repeated abstractions of blood are practised, we must be careful to distinguish between the real symptoms of the disease and those of reaction. Violent commotion of the system, a throbbing of the heart and arteries, and even intense pain, follow profuse discharges of blood from accidental causes, and are equally liable to succeed the intentional abstraction of it. While the pain and difficulty of breathing continue, the pulse being quick, the skin hot and dry, and the strength good, bleeding, to a greater or less extent, will be proper. In the second stage of the disease, or after the recuperative efforts of the system begin to manifest themselves, the loss of blood will seldom be required or justifiable. When the system is somewhat reduced by depletion, leeching over the seat of the pain will be preferable to bleeding from the arm.

The blood, in peripneumony, as in pleurisy, is buffed, and when drawn in a full stream into a bowl, is cupped. This appearance of the blood has been considered a criterion as to the necessity of repeating the operation, and the quantity to be drawn; but as it may exist when the system is sufficiently reduced, a safe judgment cannot be formed by it.

The most powerful auxiliary to bleeding is the tartar emetic. This medicine evacuates the stomach and bowels, promotes perspiration and expectoration, equalizes the circulation and favors absorption, and thus unloads the engorged vessels of the lungs. Sixteen grains of tartar emetic may be dissolved in a pint of boiling water, and a table-spoonful be given for the first dose. It should be repeated every hour, adding a table-spoonful to each successive dose, until it produces sickness at the stomach. After the effect of the medicine has been once produced, and particularly if there have been vomiting and purging, it will not be proper to repeat it oftener than every two hours, and the dose may be diminished for a few hours, when it will require to be again increased. After the stomach becomes accustomed to the action of it, very large quantities will be borne without nausea. Six or eight times the quantity it would require to produce vomiting at first, will have no apparent effect after using it a day or two. This medicine should be continued through the whole course of the disease, except there be great prostration or a tendency in the disease to assume the typhoid type. Ten grains of nitrate of potash, either in solution or combined with a grain of ipecac. in a powder, and administered alternately with the tartar emetic, is a valuable remedy, and perfectly compatible with the use of the antimony. It is often given in solution with the tartar emetic, and the only objection to this mode of

administering it is the necessity of varying so frequently the dose in order to obtain the desired effects of this medicine.

During the first stage of the disease, mustard poultices or hot stupes should be constantly applied over the affected part; but when the system has been sufficiently depleted by bleeding, a large blister should be applied, and a discharge from it be promoted by a poultice or some suitable ointment.

Should the bowels not be moved by the tartar emetic, a brisk cathartic should be given, and its operations promoted by injections if necessary. In the second stage of the disease, after the inflammation has been in a measure subdued, the syrup of squills, combined with the wine of antimony or ipecac., will be an appropriate medicine. During the continuance of the active stage of the fever, opium can seldom be given with advantage; but if the pain should continue severe after sufficient depletion, and the head be free from oppression, ten or twelve grains of Dover's powder, or a quarter of a grain of morphine, combined with a grain of tartar emetic, will often produce a pleasant effect. A dose of some anodyne may sometimes, in the last stage of the complaint, be given three or four times in the course of twenty hours; usually, however, one or two doses are sufficient.

Delirium, when not attended with drowsiness or stupor, is no objection to the moderate use of anodynes when combined with sufficient doses of antimony. We have witnessed cases in which it has had a very composing effect in a raving delirium attendant upon this disease. With the view of promoting expectoration in the second and third or last stage of the complaint, lac ammoniac, seneca root, or the muriate of ammonia, may be given instead of, or in addition to, the remedies above prescribed, as the circumstances of the case may seem to require. Should the cough continue to be troublesome after the fever has subsided, whatever the condition of the lungs may be, it should be quieted with occasional small doses of opium in some of its forms, hyoscyamus, cicuta, or lactucarium. The lactucarium, we think, will often be found a good substitute for opium, and is not incompatible with the use of any other medicines that might be necessary in the treatment of the disease.

Should symptoms indicating that the case is likely to terminate in gangrene, or great prostration, supervene, stimulants and tonics must be resorted to. Camphor, ammonia, cayenne, wine whey, and Hoffman's anodyne, are some of the best and most common medicines in these cases. These may be given in conjunction with the seneca root, squills, or lac ammoniac.

Food will not be required while the fever continues, but the system should be supported by thin gruel, rice-water, and other nourishing liquids. The drinks should generally be warm, and those that are mucilaginous, such as flax-seed and slippery-elm tea, and a solution of gum arabic, are the most suitable.

Peripneumony sometimes occurs under a malignant form, attended with typhoid symptoms, more or less marked. In this form of the

disease, which is called typhoid pneumonia, the heat is less intense; the pulse is small, soft, and quick; the tongue is covered with a dark-brown fur, or is naked and intensely red; the matter expectorated is often dark-colored, and, as in gangrene of the lungs, is sometimes fetid; and there is great general debility. We are inclined to the opinion that typhoid pneumonia is, in the majority of cases at least, an affection occurring in the course of typhus fever, and that it is caused by the location of the fever upon the lungs, and that peripneumony, when a primary disease, is seldom of the typhoid character.

In the treatment of typhoid pneumonia, bleeding is rarely admissible, and if it be practised at all, it must be with extreme caution, small quantities of blood only being drawn at a time, and leeching, perhaps, will be preferable to opening a vein in the arm. The spirits of nitre, camphor, spirits of mindererus, and other remedies usually prescribed in typhus fever, should be combined with squills, seneca-root, gum ammoniacum, muriate of ammonia, ipecac., and other expectorants, the operation of which will not tend to reduce the system. Antimony is contra-indicated in the treatment of this form of the disease, but blistering the chest is peculiarly appropriate. The strength requires to be supported by nourishing liquids, and, in extreme cases, wine whey, and other tonics and stimulants.

When peripneumony degenerates into a chronic disease of the lungs, it must be treated upon the general principles of treating such affections. A combination of anodynes with expectorants; counter irritation by blistering; Croton oil, or tartar emetic ointment; a well-regulated diet; warm clothing; and the avoidance of exposure to unfavorable weather, are the means upon which we must mainly depend. In those cases in which the cough continues obstinate, and the pulse quick, attended with some degree of pain and soreness, the following mixture will often have a happy effect:—Take of extract of cicuta and hyoscyamus, each, one scruple; pulverized gum arabic half an ounce; dissolve in five ounces of boiling water, and add, of syrup of squills two ounces, and wine of ipecac. one ounce. A table-spoonful of this preparation may be taken four or five times in twenty-four hours, and thirty drops of laudanum may be added to a dose taken at bedtime, if necessary to procure rest. Digitalis, blood-root, wood naphtha, tar-water, and the balsam of copaiva, are also among the remedies that are worthy of a trial under these circumstances.

In regard to the prognosis in peripneumony, it may be observed, in general terms, that the pulse becoming slow, soft, and full; the respiration free and easy; the patient being able to take a full breath without pain; the skin cool and covered with a natural perspiration; the tongue becoming gradually clean and of a natural color; the thirst diminishing; the appetite and strength returning; the expectoration being easy and copious, and the matter expectorated light-colored; and a return of refreshing sleep; indicate a favorable termination. On the contrary, should the pulse

become very quick and irregular; the respiration extremely laborious; the skin dry or covered with a *profuse* perspiration; the tongue covered with a dark fur, or suddenly cleaning and of a fiery-red color; the expectoration difficult, and the sputa dark-colored or fetid; if there be sudden and great prostration, delirium, a purple and bloated appearance of the face, neck, and extremities, coldness of the feet and hands, insensibility, and a starting of the tendons, death may be apprehended.

PERINEUM.—The space included between the organs of generation and the anus.

PERIOSTEUM.—A thin, fibrous membrane which covers all the bones except the crowns of the teeth. When this membrane is dry, and lifted from the bones, it is nearly transparent. The use of the periosteum appears to be to furnish a medium for the distribution of the blood-vessels to the surface of the bones. The injury of this membrane is productive of the most serious consequences to the bones.

PERITONEUM.—This is a smooth, moist membrane, which lines the cavity of the abdomen, and forms a case for all the abdominal viscera or organs. It proceeds from the diaphragm, from the fleshy fibres of the ribs, and external lumbar fibres. The bowels, liver, and spleen, are all attached to it, or processes of it. The peritoneum is a serous membrane, constantly exhaling a moist vapor, which essentially aids in the various motions and functions of the viscera of the belly and the pelvis.

PERITONITIS.—Inflammation of the Peritoneum.—See *Inflammation of the Peritoneum*.

PERSPIRATION.—The sweat is a secretion by the minute vessels of the skin. It contains an acid, and several salts dissolved in, or combined with, a large quantity of water. Both the acid and the salts are perceptible to the senses. The lungs or lights are subject to a continual transpiration of a watery vapor, like the skin. The amount of the insensible transpiration of a watery vapor, from both the skin and the lights, in the course of twenty-four hours, has been ascertained with some accuracy to be six pounds. About one third of this transpiration comes from the lungs, and the rest from the skin. The perspiration is for the most part insensible; when it stands in drops it is called sensible perspiration. One of its principal uses appears to be to cool the body or to regulate its temperature.

PERTUSSIS.—Whooping Cough.—See *Whooping Cough*.

PERUVIAN BARK.—*Cinchona Officinalis*.—The tree from which this bark is taken grows in Peru. The bark is stripped from the trunk, branches, and roots of the tree, and dried. There are three kinds of it; the most common is of a light-brown color; a second species is of a yellow color; and a third, of a red color. All the three kinds have an aromatic flavor, and a bitter, astringent taste. The yellow bark is the most bitter, but the red produces its effects in the smallest doses. The Peruvian bark shows its power to the most advantage in the cure of the fever and ague,

or intermittent fever. It was called cinchona, after the name of a Spanish viceroy, who had been cured of a fever and ague by it. It certainly has more power in curing this disease than any other remedy. The dose of the fine powder is from ten grains to two drachms. The medium dose is half a drachm. In the fever and ague, it may be given in the dose of half a drachm every hour, during the intermission of the disease, mixed with syrup, molasses, wine, or water. The same amount may be given, either in the form of a tea, tincture, or extract.

The essential nature of the Peruvian bark appears to be that of a tonic or a medicine which strengthens the whole system. It is given in the latter stages of all fevers and in all diseases of debility. Wherever mortification is suspected or anticipated, there is no remedy which will have more effect in arresting or preventing it than the bark. In putrid diseases, such as the confluent small pox, typhus fever, yellow fever, dysentery, scarlet fever, and scurvy, the bark, or the quinine, which is the essence of it, is the most reliable remedy which we possess. It is seldom given in acute inflammations, but in chronic inflammations it is often found not only compatible, but efficacious. The bark may be given with three different intentions at a time,—as an astringent, tonic, or as an antiseptic. These several effects are all produced at the same time.

It exerts great power in the cure of many periodical pains, inflammations, hemorrhages, spasms, and coughs. Wherever a disease has intermissions, the bark has been given, and almost always with good effect. It is now almost entirely superseded by the quinine, a salt which has been extracted from it by a chemical process. See *Quinine*.

PHARYNX.—The Mouth of the Meat-pipe.—It is shaped like a funnel; receives the masticated food, and conveys it into the œsophagus.

PHIMOSIS.—A constriction of the end of the foreskin, which confines it over the glands. It is the consequence of inflammation and thickening of the part. The remedies are, warm fomentations, poultices, cooling lotions, leeches, salves, mercurial washes and ointments; and, in the worst cases, division of the foreskin by the knife, or scissors. It commonly proceeds from chancres, which, in their progress, produce swelling and thickening of the prepuce. In most cases, the ulcers beneath may be healed by warm water, and solutions of sugar of lead, white vitriol, blue vitriol, corrosive sublimate, or alum, thrown between the glands and the prepuce with a syringe.

Paraphimosis is a retraction of the prepuce over the glands, which binds it like a cord, and sometimes produces mortification. The remedies are the same as for phimosis. The great object, in both cases, is to subdue the inflammation, reduce the swelling, and soften the skin.

PHLEGM.—Mucus. — In cases of inflammation or irritation, the mucous membranes, especially the mucous membrane of the lungs

and throat, secrete a thick and tenacious mucus, which is commonly called phlegm.

PHLEGMASIA LACTEA—White-leg—Milk-leg.—A peculiar kind of swelling which takes place in one or both legs of women after their confinement. See *Swelled Leg*.

PHLEGMASIÆ—Inflammations.—The principal characteristics of inflammations or phlegmasiæ are heat, topical pain, redness, swelling, and soreness to the touch. In most inflammations, the blood, after being drawn, exhibits a buffy, sizzly coat.

PHLEGMON.—A boil, or any bright-red pointed tumor, with a throbbing pain, and tendency to suppuration.

PHOSPHATE OF IRON—Phosphas Ferri.—This preparation of iron may be obtained by mixing the separate solutions of green vitriol or sulphate of iron, and the phosphate of soda. The phosphate of iron will fall down in the form of a blue powder, which, when well washed and filtered, is the medicine in question. Exposed to successive showers of water, the blue powder is changed to a yellow color, and becomes a milder medicine.

The dose of the blue phosphate of iron is from eight to ten grains; of the yellow, from thirty to forty.

This form of iron is thought to be peculiarly efficacious in suppressed and difficult menstruation, attended with disorder of the stomach and digestive powers. In scrofula, dysentery, obstinate diseases of the skin, and chronic rheumatism, it has been given with success. It is a valuable chalybeate. It may be taken in the form of a pill or powder.

PHRENITIS—Inflammation of the Brain.—See *Brain Fever*.

PHTHISIS PULMONALIS—Consumption.—See *Consumption*.

PILES—Hemorrhoids, or Hemorrhoids.—In the whole catalogue of diseases, there is scarcely one which occasions more trouble and misery than the piles, although, in general, it is not a dangerous complaint.

The piles are small tumors which arise in and about the lower end of the bowels. In some instances they are within the verge of the anus, and, in others, without it. The first are called the inward piles, and the second the outward piles.

Some of these little tumors bleed at every motion of the bowels; and others are attended with no discharge; hence, the distinction, into bleeding piles and blind piles.

These tumors are, in some instances, separate, round, and prominent; and, in others, consist of one large circular bunch.

In most cases of the piles there is extreme pain, and often severe anguish, in every motion of the bowels. The first notice which the patient will have of their existence will generally be a sense of weight in the back and lower region of the belly, sickness at the stomach, headache and vertigo, wind in the bowels, and, perhaps, a discharge of blood with the fæces. If the tumors break and discharge their contents, relief soon follows, until a

new crop arises; but where they continue tumid and unbroken for some time, there will be great torment at every discharge of the bowels.

The piles are the consequence of costiveness, intemperance in eating and drinking, the pressure of the uterus upon the rectum in child-bearing, strong purgatives, fulness of blood, and an inactive, sedentary life. They are sometimes attended with severe inflammation, pain, suppuration, and discharge of matter. When this is the case, there is danger of the formation of fistulous ulcers. What is said by authors about their being, in some cases, a vicarious discharge, or salutary evacuation, is a questionable opinion. The same may be said with equal propriety of a boil, or a carbuncle, or any other tumor attended with a discharge.

The bleeding piles produce a paleness of the skin, and a weakness of the whole system. If a falling of the gut happens at the same time, the exhaustion of the strength and the weakness of the part often require the utmost skill of the medical attendant.

Domestic Remedies.—The first thing to be secured in the treatment is a proper manner of living. As the seat of the disease is either in or near the bowels, and as costiveness always aggravates the complaint, if it does not invariably produce it, the food should be of a laxative nature, such as Indian bread, brown bread, rye pudding, coarse wheat bread, potatoes, ripe fruit, buckwheat cakes, pudding and milk, milk porridge, broths, and in general, a nutritious vegetable diet. Those who have not self-command enough to regulate their bowels by a proper diet, will be compelled to take medicine.

The best medicine which we have ever used for the cure of the piles is the lenitive electuary, taken every day, in sufficient quantity to move the bowels once or twice. The bulk of a nutmeg will, in general, accomplish this purpose. If the piles are outward, they are to be anointed at the same time with Turner's cerate,—calamine ointment.

Another good laxative is the cream of tartar, in the dose of a heaping tea-spoonful, mixed with water, molasses, or syrup.

The butternut pills are a mild physic, and very proper in this complaint. All strong, drastic purgatives are to be avoided. Castor-oil in small doses is admissible. Pills made of the extract of thoroughwort will cure the inward piles. In cases of severe pain and inflammation, warm emollient washes and poultices, and injections, will be necessary.

If fever attends the inflammation, it will be useful to raise a sweat, by small doses of ipecac., lobelia, or antimony, or any other sweating medicine. In case of prolapsus, washes made of a decoction of galls, or oak bark, may be used.

Professional Remedies.—It is seldom, if ever, that blood-letting is required by the lancet, but leeches are often of the most essential service. Weak solutions of white vitriol or sugar of lead may also be used. The displaced part must be carefully returned

every time it comes down, and a recumbent position observed while the accident lasts.

In obstinate cases of the piles, it has been found advisable to extirpate them, either by ligature or the knife; and, in many cases, the practice has been successful.

In cases of severe hemorrhage, astringent injections must be used, and the constitution braced by the use of iron, quinine, and the elixir vitriol. In general, the diet should be cooling and nutritious, and everything avoided which tends to heat the blood and aggravate the humors.

PILLS.—As most medicines have a nauseous and disagreeable taste, the best way to conceal it is to make them into pills. In order to make powdered substances into pills, it is only necessary to mix them with molasses, quince, or some other syrup, or with the mucilage of gum arabic. Aloes, myrrh, and other resinous substances, may be reduced to a fine powder, and mixed with the mucilage of gum arabic. Extracts are often of the right consistency for pills without any addition.

Dry, fine powders require some adhesive, sticky fluid to form them into a soft mass that will bear being rolled into pills.

Gums and inspissated juices that require softening may be moistened with new rum or alcohol. In general, the mucilage or solution of gum arabic in hot water is the best substance to mix pills with. Medicines operate more powerfully in the form of pill than in any other way. In some cases this is desirable, and in others to be avoided. Ipecac. given in powder will operate as an emetic; given in pill, it will operate as a cathartic; and so with many other substances. A pill should be made hard enough to retain its globular form after it is rolled up.

PINK-ROOT—*Spigelia Marilandica*.—This plant grows in the Southern States. It is used principally in the expulsion of worms. The roots are the most medicinal, although the whole plant possesses the same properties. A dose of the powdered pink-root is from ten to fifteen grains. It is the most commonly given in the form of a tea or infusion, mixed with an equal quantity of senna. Half an ounce of the pink may be mixed with an equal quantity of senna, steeped in half a pint of water, and taken at three different times in the course of the day. For children, half the quantity of each will be sufficient to take in one day.

PIPERINE.—This substance is obtained from black pepper by digestion in alcohol, and evaporating the tincture. The first product is a fatty, resinous matter, which, after being washed thoroughly in boiling water, is dissolved again in alcohol by the aid of heat. This solution, after standing for some days, throws down a multitude of crystals. This crystalline matter is piperine. It possesses the same peppery taste with the substance from which it is obtained. In its pure state, it is of a white color, and transparent, but is often combined with a resin, which gives it a yellowish color. It is without smell, readily melts by heat, and is slightly soluble in hot water.

A dose of the piperine is two grains, in powder or pill. It may be mixed with jelly, syrup, or molasses. The only disease in which it has been much used is the fever and ague or intermittent fever. Two grains are given, every hour or two, between the fits of the fever. Its action seems to consist in exciting warmth and a perspiration. It will doubtless be found of service in chronic rheumatism, catarrh, and chlorosis.

PLACENTA—After-birth.—See *After-birth*.

PLAGUE.—The plague is a disease which, in its symptoms, bears about the same relation to typhus fever which the Asiatic cholera bears to the common cholera morbus of our climate. The plague is an entire stranger to our country, and we believe to the western continent. It has once or twice prevailed in London and the cities on the continent of Europe, but not in latter years. In 1665, it carried off sixty thousand people in the city of London alone.

The symptoms which the disease betrayed in 1665, in London, are the same which now accompany the disorder in the Barbary states, Egypt, and the cities of the Turkish empire. In Egypt and the adjacent countries the plague is an annual epidemic. The ancient Grecian historians take notice of this disease, and define its character and symptoms very much as they are defined by the latest writers upon the subject. They relate that the air of the city of Athens became so putrid and pestilent that the dogs sickened and died in the street. Its destructiveness, when it travels north, appears to be much greater than when confined to the countries in which it annually originates.

The following is a description of its symptoms, as it appeared in Morocco, some years ago, given by Dr. Jackson, an English physician, who had the charge of the medical department of the army stationed there. "The symptoms of this plague," says he, "varied in different patients; the variety of age and constitution gave it a like variety of appearances and character. In some it manifested itself by a sudden and violent shivering, and in others by a sudden delirium, succeeded by great and unquenchable thirst. Cold water was eagerly resorted to by the unwary, and proved fatal to those who indulged in its momentary relief. Some had one, two, or more buboes, which formed, and became, in the course of a day, as large as a walnut; others had a similar number of carbuncles or black boils; others had both buboes and black boils, which generally appeared in the groin, under the arm, or near the breast. Those who were affected with shivering, but who had no red swellings in the groins, black boils, or red purple pimples on the skin, were invariably cut off in less than twenty-four hours; and the body of the deceased became quickly putrefied, so that it was indispensably necessary to bury it in a few hours after death." The European merchants shut themselves up in their respective houses, as is the practice in the Levant. "I did not," says Dr. Jackson, "take this precaution, but rode out occasionally to take exercise, on horseback. My daily observation convinced me the epidemic

was not caught by approach, unless that approach was accompanied by an inhaling of the breath or by touching the infected person."

The symptoms of the plague may be summed up as follows: a slight indisposition for a few days, such as weakness, headache, and loss of appetite. The patient is then seized with alternate sensations of cold and heat, despondency, trembling of the limbs, fainting, dizziness and delirium, the pulse weak and irregular. As the disease advances, the breath becomes fetid, and discharges of black bile take place from the stomach. Black boils arise in the groins, in the neck, under the arms, and about the breasts; and red or purple pimples or spots over the whole body. Passive bleeding takes place from the nose and mouth, and passive diarrhœa from the bowels. The whole body assumes a putrid appearance.

The appearance of the carbuncles or black boils and buboes is commonly hailed as a favorable symptom, though, where the black boils do not suppurate, but assume a putrid, livid hue, the case proves fatal. In some instances, people have been known to drop down dead of this disease, without a moment's warning; but more commonly it lasts five or six days, and in some cases will run to thirteen and seventeen days.

The following graphic picture will give the reader a more complete idea of the appearances of this pestilential disease. "As I approached the beach," says the writer, "to examine the sick and suspected Major transport in Egypt, the first object that presented itself was a young woman, named Francisca Kennis, supported in a chair, moaning under the oppressive disease. She stared wildly about, quite insensible to every object around her, and there was a muddy glistening in her eyes, which I had seen described, but had never seen. Her husband stood over her in the deepest distress, and held a lovely infant to her breast, who tranquilly sucked the poison that soon after destroyed it. I feared at first that force would have been necessary to separate the father from his wife and child; but he at length yielded to entreaty, and was removed from the infection, though too late to save his life. She was soon after conveyed to the pest hospital, where she soon expired, and the child was confided to an Arab, who fed and watched over it with the greatest care. On the 28th of March, the fifteenth day after the separation took place, the infant was attacked with the plague, and languished until the 4th of April, when death terminated its sufferings."

As this disease has never made its appearance in our country, we can only give a history of the treatment which has been followed in those places where it has prevailed. In its earliest stages, blood-letting appears to be the most favorite remedy; but more lately, blood-letting is recommended by leeching and cupping rather than from the arm. In the commencement of the disease, while it is yet only an indisposition, an emetic of ipecac. is given to evacuate the stomach and to excite a general sweat. Where retching continues

after the operation of the emetic, effervescing draughts should be given, with ten or fifteen drops of laudanum. The evacuation of the stomach should be followed by that of the bowels, after the stomach has been refreshed with a little gruel, arrow-root, or water. A dose of castor-oil, salts, magnesia, or any other gentle cathartic, may be used. Strong purgatives are deemed injurious. In the advanced stage of the plague, the bowels should be moved by injections solely.

There is a pretty general agreement among writers upon the plague, that the excitement of a gentle sweat is one of the most desirable ends to be obtained by the use of remedies. Small doses of antimony and ipecac., at intervals of one or two hours, or a few grains of the Dover's powder, are the sudorifics most in use, and the most to be depended upon. Camphor, ammonia, and effervescing draughts are also given, to support the strength, and to favor the relaxation of the skin. Blisters are applied, to relieve the head and stomach, or any other organ which may be particularly affected. Acid drinks are given, to quench the thirst and to neutralize the contagion. Fomentations and poultices are applied to the stomach, bowels, or the feet, as the case may require, and wine administered to sustain the strength, where it does not increase the fever. Whenever a remission of the fever takes place, the quinine is administered freely, together with the elixir vitriol and the vegetable acids. Opiates are given in any stage of the fever where they do not enrage the pestilence. Sponging the body with cold water is a remedy much in use.

The olive or any other oil rubbed into the skin is said to be a protection against the contagion. All communication which is not absolutely necessary should be prohibited between the sick of this disease and the well. It is very contagious, although the contagion is not carried in the air to any great distance. Contact is pretty sure to produce it. Whether it originates in the first instance from the earth, or whether it is generated in the human body, is a problem which has never been solved.

PLAITED HAIR—*Plica Pilonica*.—This disease seems to prevail chiefly in the north of Europe. It is an affection of the hair itself. The hairs become greatly enlarged in their diameters, and are covered with a kind of slime which mats and entangles them fast together. The hair lays in folds and plaits, and grows to much greater length than common. The affection comes on with more or less symptoms of fever; there is usually lassitude and heaviness; pain in the head and bones, and an increase of heat; but these symptoms are all said to subside as soon as the affection of the hair commences. The head contracts a fetid smell, and the hair becomes almost inseparable from the quantity of gummy matter which oozes from it. The nails of the fingers undergo a similar affection, communicated to them by scratching the diseased hair. They thicken, change their color, and become corrugated. Baron Larrey found that the disease was produced by nastiness, cold, and negligence, and that it was not contagious.

The disease is said to be cured by antimony. When feverish symptoms exist, the medicines used in fever will be proper in this disease. The hair should be cut close to the head, and the scalp well washed with warm water and soap. If there is heat and soreness in the scalp, weak solutions of corrosive sublimate, of sugar of lead, or of the white vitriol, will be proper. Turner's cerate and the citrine ointment are appropriate remedies. It is not a dangerous disease, although when not cured in the early stage, it frequently lasts for life. If the gummy matter happens to lodge upon the surface of the body, it is said to produce obstinate sores.

PLANTAIN.—The leaf of the plantain is cooling and resolvent. Applied often to the surface of slight wounds, swellings, bites, and inflamed parts, it lessens the heat and operates kindly in healing them. The fresh leaves appear to absorb heat very fast, and, by condensing the insensible perspiration, keep the part moist. It is said to be a cure for the bites of venomous spiders.

PLASTERS.—In making plasters, the oily and resinous substances are to be melted with a gentle heat, and then constantly stirred, adding at the same time the dry ingredients, if there be any, until the mixture, on cooling, becomes stiff. Plasters are made hard by white lead and other metallic oxides. See *Diachylon Plaster*, and *Adhesive Plaster*.

PLASTER OF SPANISH FLIES.—Take of mutton suet, yellow wax, resin of pine, Spanish flies, finely powdered and sifted, each equal parts. Melt the suet, wax, and resin together over a slow fire, and then add the powdered flies. The flies should not be added while the mixture is very hot. This is the common blistering plaster. It requires about twelve hours to draw a full blister; the blister is then cut, and the tender surface dressed with mutton suet or simple cerate.

PLEURA.—The membrane which lines the inside of the chest and covers its viscera. A moist vapor is constantly exhaled from this membrane, which lubricates the surface of the lungs and inside of the chest. A duplicature of the pleura forms the mediastinum, or partition which runs through the middle of the chest. The two folds which form this partition enclose the heart. It is the seat of the disease called the pleurisy.

PLEURISY—Pleuritis—Inflammation of the Pleura.—Pleurisy is an inflammation of the membrane called the pleura, which lines the chest and invests the lungs, and in its active form is one of the most violent diseases to which man is liable. It is characterized by cold chills, followed by acute, lancinating pain in one side of the chest, which is increased by coughing and by inspiration, by lying on the affected side, and sometimes by pressure. The cough, which is a *constant symptom*, is short, dry, and distressing. If anything is expectorated, it is only a frothy mucus, occasionally intermixed with a little blood; the inspirations are frequent, and are voluntarily shortened to prevent the pain occasioned by expanding the chest; the tongue is coated; the pulse quick and hard; the

skin is hot, and the cheeks flushed; there is thirst, restlessness, and anxiety; the urine is scanty and high-colored. There is a dulness of sound on percussion, and on auscultation the inspirations sound feeble, distant, or are inaudible. The blood, on being drawn, is cupped and buffy.

Remedies.—In the treatment of pleurisy, the first and decidedly most important thing to be done is to bleed copiously from the arm; for without bleeding, whatever else may be done, we cannot rationally expect success to attend our efforts. The blood should be drawn, as early as possible after the nature of the disease is ascertained, from a large orifice, in sufficient quantity to relieve the pain and difficulty of breathing; and should the pain return, the operation should be repeated until the inflammation is subdued. It is well known that some irregular practitioners condemn bleeding, and pretend to cure this and all other diseases by other means; but we have the experience and testimony of the most celebrated physicians of all ages and countries to oppose to their ultra and generally unphilosophical systems. Undoubtedly many affections of the chest, some of which simulate pleurisy, may and have been cured without it; but we consider it a duty incumbent on us to warn those who may be attacked with this disease in its true form, against the danger of rashly trusting, exclusively, to any other remedies whatever.

Frequently bathing the extremities in hot stimulating baths, and hot poultices or fomentations to the side, contribute much to the comfort of the patient, and by calling the blood into the extreme vessels, and thereby diminishing the quantity at the seat of the disease, are powerful auxiliaries in bringing the inflammation to a favorable termination. The most efficient medicine employed in the treatment of pleurisy, and indeed almost the only one that is necessary in many cases, is the tartar emetic. The best form is that of solution in hot water. It should be given in doses large enough to produce nausea, and be repeated every two or three hours, according to its effects upon the stomach. Antimony is a medicine of which the stomach will bear more and more the longer it has been taken, and it is necessary, therefore, that the dose be increased in proportion as the stomach becomes accustomed to its action. If this medicine cannot be obtained, or if there be any reasonable objection to its use, lobelia and ipecac. are the best substitutes. If these medicines should not operate upon the bowels, an active cathartic should be administered. After the system has been thoroughly depleted, should the disease prove obstinate, a large blister, applied over the seat of the pain, should be tried, and a full dose of Dover's powder every six or eight hours will sometimes produce the best effects. As in other diseases in which the lungs are in any way implicated, the drinks should be warm and demulcent.

When successfully treated, the violence of the symptoms will be almost immediately mitigated, and the disease, perhaps, arrested at once; though it more frequently happens that the improvement

is more or less rapid from day to day, until about the seventh or eighth, when a perfect crisis is formed, as in other inflammations.

But if no efficient means be used to arrest its progress, it may terminate fatally in from two to seven days, according to the violence of the attack. Dissections have shown that inflammation of the pleura, to a greater or less extent, is not an uncommon occurrence in children, though often unsuspected by the physician or friends; and that adhesions are frequently formed between that portion of the membrane which envelops the lungs and that which lines the walls of the chest. These adhesions are not dangerous, and no doubt exist in many who have no suspicion of the nature of their disease. By preventing the free and easy expansion and contraction of the lungs, they may be the cause of some degree of shortness of breath and pain, when taking violent exercise. When pleurisy becomes chronic, that is, continues on after the active stage of the inflammation has passed, it commonly terminates in an effusion of serum, or of purulent matter, into the cavity of the thorax, and the disease is called empyema; or, if the parenchyma or substance of the lungs be implicated, it may degenerate into consumption. Cold chills occurring a number of days after the attack, vague pains in the side, difficult breathing, dry cough, irregular febrile symptoms, and the pulse continuing quick, small, and wiry, are strong indications of an effusion. (See *Empyema*.) A subsidence of the pain, the breathing becoming free and easy, the pulse slow, the skin cool and moist, and a return of the appetite, are almost sure signs of a perfect recovery; but the reverse of these symptoms forebodes danger.

PLEURISY-ROOT—Butterfly Weed, or Decumbent Swallow-wort—*Asclepias Tuberosa*.—This shrub abounds in the Southern more than in the Northern States. Fifteen or twenty stalks of the size of a pipe-stem, and one or two feet in height, proceed from one root. They are covered with down, and on the sun side are of a reddish-brown color. The flowers are of an orange color, and are said to surpass in beauty all the flowers of the field. These are succeeded by pods.

The medicinal part is the root. It possesses in a high degree the power of raising a sweat. The dose is half a drachm in powder, repeated every two hours, in a cup of warm water. It opens the pores of the skin and lets loose a flood of perspiration. It exerts almost an equal power in promoting the secretion of phlegm or mucus, and is an inestimable remedy in catarrhs, coughs, and consumption. Every family should become acquainted with this plant. It may be given to children or grown people, in the form of a strong tea, in the dose of a tea-cupful down to a tea-spoonful or great spoonful.

In large doses it operates upon the bowels. Drs. Barton, of Philadelphia, and Bigelow, of Boston, both speak of the pleurisy-root in the highest terms.

PLICA PILONICA—Plaited Hair.—See *Plaited Hair*.

PODOGRA—The Gout.—See *Gout*.

POISON BERRY TREE—*Melia Azederach*.—This tree is also called the Pride of India. It may be found as an ornamental tree in South Carolina and Georgia. The root is highly medicinal. It operates both as an emetic and cathartic. In the Southern States, it is highly prized as a medicine for the expulsion of worms, often succeeding when other things fail. It will also lessen and subdue the worm fever.

The root, in early spring, while full of sap, will sometimes produce stupor, delirium, and insensibility, like many other medicines. It must, therefore, be used with some degree of care. The following is the usual manner of giving it.

Take four ounces of the bark of the fresh root, boil it in a quart of water until it is reduced to a pint, and give one or two table-spoonfuls every two or three hours, until it operates. Four ounces make a large handful. The berries are sometimes given to children for worms; and the pulp of the fruit, made into an ointment with lard, for scald-head.

POISONS.—Those substances, which, when introduced into the system, whether through the mouth or skin, produce deleterious, dangerous, or fatal effects.

Poisonous substances exist in each of the three kingdoms of nature, the animal, vegetable, and mineral.

Those belonging to the animal kingdom are called venoms, as the venom of various reptiles and spiders; and virus, or the poisonous matter produced by disease, as the virus of small pox. Whether the poison introduced into the system in dissection wounds, sometimes producing the most serious effects, is the production of disease, or is generated by the decomposition of animal matter, has not been satisfactorily determined, but probably the latter, as no symptoms of the disease of which the subject died are produced. The effects produced by the bite of rabid animals are caused by a virus generated by a peculiar disease.

The vegetable poisons are very numerous, so much so indeed that only a small proportion of them can be treated of in this article; this, however, is a matter of little regret, as the effects of most, if not all of them, are, and must, in the present state of our knowledge, be treated according to the same general principles.

The number of poisonous substances in the mineral kingdom is also very great, and the time will undoubtedly arrive when, through the aid of chemical science, antidotes will be found for all of them; but at present there are many for which no antidotes are known.

Poisons have been differently arranged or classified, by different authors, according to their mode of action, some producing irritating or corrosive effects, some narcotic, some putrescent, and others various combinations of these effects. These classifications are all liable to objections, as they bring together substances the physiological action of which on the system is very different, and which must therefore require very considerable modifications of treatment. Without regard to classification, we shall briefly lay

down a few rules or principles applicable to the treatment of poisons in general, and then particularize a few of those that are most frequently taken or administered to destroy life, or are liable to be taken accidentally.

In the treatment for poisons that have been swallowed, there are three indications to be fulfilled: the first is to remove the poisonous substance, or as much of it as is practicable, from the stomach; the second, to neutralize and prevent the injurious effects of what remains in the stomach; and the third, to obviate the effects which may have been produced upon any particular organ, or the system generally.

The first of these indications is to be fulfilled by the use of prompt and powerful emetics, or the stomach-pump. The sooner active vomiting can be induced after the poison has been swallowed, the greater will be the chance of preventing its baneful effects. As a general rule those emetics which operate the quickest are to be preferred, avoiding of course those that would themselves produce poisonous effects if not ejected. The best emetics are ipecac., tartar emetic, white vitriol, alum, blue vitriol, lobelia, and thoroughwort. Ipecac. should always be preferred, and its action may be hastened by combining it with white vitriol, when not contra-indicated. The lobelia and thoroughwort, being slower and less certain in their operation, should be used only when there is no other at hand. When an emetic cannot be obtained, vomiting may be produced by passing the finger or some irritating substance down the throat. Half a pint of a moderately strong solution of saleratus or pearlashes, followed immediately by as much vinegar, has been known to produce violent vomiting, and, in a case of poisoning by opium or any other narcotic, should be tried. When emetics are not at hand, or do not operate, or if the patient be incapable of swallowing, or obstinately refuse to do so, the stomach-pump is the only resource. With this instrument the stomach may be emptied, and any medicine introduced that the case may require, and pumped out again if necessary.

The second indication is to be fulfilled by the employment of those substances or antidotes which are known to neutralize the particular poison, and thereby render it inert; and if no antidote be known, by such substances as will combine with it and shield the stomach from its action.

All acids are neutralized by the alkalies, such as magnesia, saleratus, pearlashes, ley, the super-carbonate of soda, lime, chalk, and ammonia; and the alkalies by the acids, such as vinegar or lemon-juice; and acrid or corrosive poisons, as arsenic, corrosive sublimate, and blue vitriol, are rendered less active, and their injurious effects in some degree prevented, by albuminous, oily, and sweet mucilaginous drinks. The whites of eggs, milk, the mucilages of slippery-elm, flax-seed, Irish moss, and sugar and water, are the most appropriate.

The fulfilment of the third indication will depend entirely upon the nature of the poison taken. If inflammation and fever have

been induced, leeching, blistering, cold applications, cooling cathartics and antimony may be indicated; if narcotism, stupor or insensibility, cold applications to the head, stimulants to the extremities, blisters, frictions, internal excitants, strong coffee, vinegar and water; if debility or great prostration, wine, ammonia, quinine, and nutritious liquids.

Having premised these general observations, which will be found applicable to the great proportion of instances, in order to avoid repetition, in particularizing some of the most common poisons, only some of the peculiarities of each, with the antidotes, when known, will be noticed, leaving the application of the general principles to the judgment of the reader.

Arsenic. — Perhaps there is no poison that has been taken or administered with the intention of producing death as frequently as arsenic. This is a corrosive poison of the most deadly character, for which no antidote has been known until very recently. Why it has so often been selected for this purpose can hardly be conceived, except on account of its certainty to produce the effect, as there is probably no one in the whole catalogue that causes a more distressing and awful death. Violent burning pain in the stomach and bowels, dryness and tightness in the throat, unquenchable thirst, retching, vomiting of bilious and bloody matter, tenesmus, scalding pain in voiding, and sometimes suppression of, the urine, hoarseness and difficulty of speech, convulsions, cramps, lividity of the extremities, hiccough, death-like countenance, clammy sweats, red, sparkling eyes, and delirium, are the symptoms usually produced by it, and death soon follows in the train. It has, very recently only, been ascertained that the hydrated peroxide of iron is an antidote to arsenic. The precipitated carbonate and prepared red rust of iron are also recommended for the same purpose, but the first is to be preferred if it can be procured. It is given in doses of half a drachm to a drachm, every ten minutes, diffused in water, until relief is obtained. If Fowler's solution of arsenic have been taken instead of the white arsenic, lime-water, in copious draughts, may lessen its potency. For the fly-powder, cobalt, and some other preparations, and even the white arsenic, if vomiting have not commenced, emetics of white vitriol are advised to be given immediately. The pains and cramps may be relieved by counter irritation with mustard poultices, blisters, opium, and mucilaginous drinks. Symptoms of inflammation must be treated upon general principles. Large doses of magnesia, lime-water, chalk and water, and charcoal, are the remedies that have generally been used, and by some are supposed to be antidotes; when the preparations of iron cannot be procured, these should be tried, but cannot be depended upon. Hahneman recommended a pound of soap to be dissolved in four pints of warm water, and a cupful to be given every three or four minutes. This remedy has the advantage of being always at hand, and should be resorted to when nothing else can be done.

The tests by which the existence of arsenic can be ascertained

in the contents of the stomach, are the ammoniacal sulphate of copper, the ammoniacal nitrate of silver, and the sulphureted hydrogen gas. The first will produce a green, the second, a pale-yellow, and the last, a bright-yellow precipitate, if arsenic be present. A portion of one of these precipitates, well dried, is then to be mixed with charcoal and exsiccated carbonate of soda, put into a small glass tube, closed at one end, and heated to a red heat in the flame of a lamp. "The arsenic will be reduced and sublime in the upper part of the tube, forming a dark metallic crust. By heating this crust in a small flame, crystals of white arsenic will form, having a high adamantine lustre."

Corrosive Sublimate. — This preparation, the *Red Precipitate*, and several other preparations of mercury, when taken in over doses, are most violent, irritating, and corrosive poisons. The symptoms are a harsh, astringent, metallic taste in the mouth, a tightness and burning sensation in the throat, burning pain in the stomach and bowels, vomiting, purging of bloody matter, drowsiness, stupor, convulsions and death. The best remedies known are the whites of eggs, beaten up with milk or water, milk, and wheat flour and water. What is done must be done promptly, or the remedies will be unavailing. Potash produces with corrosive sublimate a yellowish precipitate; ammonia, a white; lime-water, an orange, and sulphureted hydrogen, a black precipitate. There are various methods of testing this substance, but it is perhaps unnecessary to describe them here, as they would occupy room that might be more usefully appropriated to other matter.

Antimony. — Some of the preparations of antimony are poisonous, in large doses. They cause vomiting, pain in the stomach, colicky pains, and violent cramps. The remedies are, copious draughts of sugar and water, irritating the fauces to induce prompt and free vomiting, followed by a decoction of nut-galls, oak bark, Peruvian bark, or the bark in substance diffused in water, as antidotes.

The antidote to *Nitrate of Silver*, — lunar caustic, — is common salt in solution; by this it is rendered inert.

The effects of *Blue Vitriol* are best counteracted by albumen. Vinegar is inadmissible.

Nitrate of Bismuth is treated by milk and sweet mucilages.

Copperas and *Muriate of Iron*. — For these the carbonate of soda is the most promising remedy.

White Vitriol, — sulphate of zinc, and the oxide of zinc, — is decomposed by the carbonate of soda in solution. The vomiting will be relieved by large draughts of warm water.

Tin, the same as other irritating poisons. Milk in large quantities.

Phosphorus. — When this has been swallowed, an emetic should be immediately given, and followed by magnesia, suspended in water and mucilaginous drinks.

Lead, introduced into the system either by the mouth or skin, may produce nervous symptoms, spasms, palsy, obstinate con-

stipation of the bowels, colicky pains, rigidity of the abdominal muscles, sometimes salivation, giddiness, debility, torpor, coma, convulsions and death. The phosphate of soda and Epsom salts are antidotes to the sugar of lead. For white lead, the red oxide and litharge, sulphuric acid largely diluted with water is recommended.

Oil of Vitriol, Aquafortis, Muriatic Acid, and the Oxalic Acid, are all violent corrosive or escharotic poisons, when swallowed in their concentrated forms. They act as powerful caustics upon the parts with which they come in contact. The symptoms to which they give rise are sour, acrid taste, burning and soreness in the mouth and throat, eructations, intolerable pains in the stomach, a shrivelled and excoriated appearance about the mouth and other parts touched by them, glazed countenance, cold, clammy sweats, convulsions, death. The nitric acid turns the skin yellow, and the sulphuric, black.

For aquafortis and oxalic acid, the carbonates of magnesia,—common lump magnesia,—and of lime,—chalk,—are the only alkaline substances that can be employed with safety as antidotes; but for the oil of vitriol, the muriatic acid, the calcined magnesia, lump magnesia, chalk, and the carbonates of soda and potash,—pearlashes,—may be given indiscriminately. When the oil of vitriol has been taken, water must *not* be drank, on account of the great heat which is produced by mixing them. Ammonia is an antidote to the acids. It requires to be largely diluted with water. "Liquid chlorine has also been found efficacious." The matters vomited and the contents of the stomach effervesce with chalk and magnesia.

Potash, Pearlashes, and the preparations of Ammonia, produce symptoms similar to other irritating poisons, and their action is counteracted by vinegar, lemon-juice, the citric and tartaric acids.

Carbonate of Barytes, and Lime, are neutralized by sulphate of soda, Glauber's salts, and Epsom salts. Lime is neutralized by the acids.

Alcohol.—It would be superfluous to describe the effects of this poison, as they are by far too generally known. A smart emetic, stimulating injections, cold applications to the head, and, if the head be very much oppressed, bleeding from the jugular vein, are the best remedies.

Prussic Acid. Hydrocyanic Acid.—This is the most deadly poison known. One drop of the pure acid would probably cause instantaneous death. It is so rapidly fatal that its effects have very seldom been treated. When not instantly fatal, a sudden loss of sense, locked jaw, difficult and rattling respiration, coldness of the extremities, small pulse, dilatation of the pupils, and convulsions, are the symptoms usually observed. There is a smell of bitter almonds proceeding from the mouth and in the contents of the stomach, which may aid in forming an opinion of the nature of the case. Diluted water of ammonia is considered the best counter poison which can be used against this acid. Otherwise

its effects, are to be combated according to the general principles heretofore laid down.

Opium, though incontestibly one of the most valuable remedial agents ever used, when judiciously employed, is nevertheless a powerful narcotic poison, producing certain death when taken in large quantities. The manner in which it acts is peculiar, and not well understood, as it leaves no traces upon the system sufficient to reveal its mode of operation. The symptoms of an overdose of opium resemble those of an apoplectic fit. The breathing is slow, frequently interrupted and stertorous; a dark suffusion often comes over the countenance, passes off, and returns again and again; the pulse is full, strong, and slow; there is an irresistible disposition to sleep; the intellect is confused, or there is complete insensibility; the sleep continues profound; the skin at length becomes cool and clammy, the extremities cold, the pulse feeble and thread-like, the countenance deathly, the interruptions in the breathing more frequent and longer; there is torpor and insensibility, from which the patient cannot be aroused. The length of time before death ensues varies in different cases, from one to ten or twelve hours; from four to six is the most common. In cases of poisoning by this drug, the most powerful emetics must be resorted to. The white vitriol, ipecac., tartar emetic, blue vitriol, alum, saleratus and vinegar, and tickling the fauces, are among the remedies to be essayed. The stomach-pump is peculiarly useful, and should be used as early as possible, before the opium has produced its full effects upon the system. Bleeding and leeches are sometimes necessary. Dashing the head and shoulders with cold water, friction, keeping the patient in motion, and stimulants to the extremities, and injections, should be tried. If these fail, and the patient appear to be near dying, the breathing having nearly ceased, artificial respiration should receive a trial, by alternately inflating and exhausting the lungs, until the medicine has expended its force and the powers of life rally. A case is recorded of a child apparently in a dying state that was saved by this means. We are not aware that galvanism has ever been proposed for the purpose of keeping up the respiration and other vital functions, in these cases, but it appears to us to be the most rational and probable means, and as it would be harmless, we should strongly recommend a trial of it. The certain and powerful effects which it has upon the nervous and muscular systems, are witnessed daily, and it is well known to have been employed with some success in cases of a failure of the nervous influence from other causes. It should be applied to the spine between the shoulders, and over the abdomen and chest, to stimulate the respiratory muscles. When the system is somewhat relieved from the narcotic effects, the strength must be supported, and stimulants may be required. Some of the best stimulants are ammonia, strong coffee, and vinegar. We should never despair of success as long as the heart beats, for recoveries sometimes take place under what appear to be the most desperate circumstances.

We witnessed a case of this kind not long since, in a child, that had, through the carelessness of the mother, taken an over-dose of Godfrey's cordial; and this was by no means a solitary one that has occurred under our personal observation.

The treatment recommended for opium applies equally well to *Morphine*, and all other preparations of that drug.

The *Belladonna*, *Deadly Nightshade*, *Cicuta*, *Hemlock*, *Hyoscyamus*, *Henbane*, and *Stramonium*,—*Apple Peru*,—will serve as examples of the narcotic poisons generally, the symptoms and treatment, as far as known at present, being the same. When received into the system in too large doses, these substances produce the following train of effects: heaviness in the head, intoxication, numbness, sickness, and sometimes vomiting, stupidity, dryness in the throat, muttering delirium, — sometimes lively, at others raving, — convulsions, or palsy. The pulse is variable, but commonly full and strong, the pupils very much dilated, the breathing hurried, insensibility, death. We have witnessed a number of cases, occurring in children that had eaten green *poisonous weeds*, in which the pupils were contracted, the eyes red, the pulse small, muttering delirium, vomiting, and anxiety. Recoveries took place. These cases are to be managed much in the same manner as poisoning with opium. No vegetable acids should on any account be allowed until the stomach is thoroughly evacuated; after which, vinegar and strong coffee in a measure counteract the effects upon the system. If the head be much oppressed, bleeding, frictions, blisters, and stimulating injections, will be the proper remedies.

In poisoning with *Colchicum*, meadow saffron, the most troublesome symptom is vomiting. This may be allayed with soda powders, strong coffee, mustard poultices to the stomach, or, if the case prove obstinate, a pill of opium. The effects of this medicine remain two or three days in some instances. We are induced to notice this article in particular, having seen several troublesome cases where the wine of colchicum had been mistaken for clear wine.

Poisoning of the skin with *Dogwood*, or *Swamp Sumach*, *Common Parsnip*, etc., very much resembles erysipelas, and requires nearly the same treatment. A favorite remedy of the late and justly celebrated Dr. S. Drown was the witch-hazel, applied as a wash in form of decoction. A solution of sugar of lead, and cooling cathartics, are the remedies usually prescribed.

Poisonous Mushrooms.—There are five varieties of agaric, or mushrooms, that are poisonous,—the fly, pepper, deadly, bulbous, and the champignon. They produce pain in the stomach, nausea, vomiting, purging, heat, thirst, convulsions, faintings, small, frequent pulse, dilated pupils, delirium, stupor, cold sweats, death. When the stomach is cleared with emetics, salts and clysters, and brandy and water, should be administered, except inflammation supervene, when it must be treated as in other cases.

Cantharides, (the Spanish and potato fly,) are exceedingly poisonous when taken into the stomach. They cause an offensive breath.

acid taste, great heat in the throat, stomach, and abdomen, pain in the stomach, vomiting, bloody stools, painful priapism, burning pain in the bladder, strangury, retention of urine, frightful convulsions, delirium, and death. Large draughts of sweet oil, sugar and water, flax-seed tea, and milk, are advised. Inflammation of the stomach and bladder is to be subdued by leeching, and a liniment of camphor and sweet oil. Camphor, internally, is the best anodyne to relieve the strangury.

The sting of *Venomous Insects*, as the tarantula, scorpion, hornet and bee, is relieved by hartshorn and oil, salt and water, the juice of raw onion, with hartshorn or camphor internally. The sting, when left, may be extracted with a needle, sharp-pointed knife, or by pressing over it a watch-key.

Serpents.—The bite of venomous serpents is followed by pain in the wounded part, which extends over the limb or body. There is a hard swelling, which is pale at first, but soon becomes red, livid, and gangrenous. Fainting, vomiting, small, irregular pulse, convulsions, difficult breathing, a failure of the sight and intellect, and cold sweats succeed. Inflammation, extensive suppuration and gangrene in the wound, often precede death. When a person is bitten by a venomous serpent, perhaps the surest way to prevent its effects upon the system is to cut out a portion of the skin and flesh around the bite, and then to promote the bleeding by washing it in brook or warm water, if at hand. Another way of treating the wound is to wash it and apply a cupping glass over it, to promote bleeding, and extract the poison. Any glass, or other small vessel, from which the air is exhausted by a burning taper, will answer in the room of the cupping glass. Powerful caustics are sometimes used upon the wound, to produce the death and sloughing of the poisoned portion around it. A rod of iron, heated to a white heat, and applied to the wound, would be the readiest and surest method of producing a slough. If nothing better can be done under the circumstances, a ligature may be applied around the limb to stop the circulation, the wound be enlarged and washed for a long time in pure water.

Sucking the wound is recommended by some, and has been practised with success. If there be no abrasion or raw surface in the mouth, and due caution be used, this undoubtedly is a safe and efficient practice. Within a few years past, the spirit of hartshorn has been somewhat extensively tried as an antidote to the poison of the rattle-snake. It is applied to the wound and taken internally. Cases have been reported in which it was given with success, when the system was under the full influence of the venom. Many who are acquainted with the virtues of this medicine, and are exposed to these reptiles, are in the habit of always carrying it with them. It is probably better entitled to confidence than any other remedy at present known. Arsenic has been strongly recommended as an antidote, and a number of indigenous plants have enjoyed a high reputation, but we are unable to judge of their merits. Inflammation, fever, debility, etc., arising from these bites,

must be treated upon the general principles of treating these affections. The wound from the bite of a rabid animal should be treated in the same manner as that of a serpent. It should be cut out, the bleeding promoted, and caustic applied. For treatment of hydrophobia, see *Canine Madness*.

Fish.—Stale fish often produce pain and sickness at the stomach, heat and pain in the head and eyes, dizziness, and not unfrequently an eruption on the skin. An emetic and purgative will be required, after which the stomach must be quieted with super-carbonate of soda, soda-powder, calcined magnesia, and laudanum. The irritation of the eruption may be allayed by bathing with tepid water, alcohol and water, salt, or camphor, and vinegar.

See Dissection Wounds, on the subject of poisoning from that cause, in the article *Wounds*.

POLYPUS.—A polypus is a fleshy tumor, which commonly grows in the shape of a pear. Some of them are rapid in growth, and others slow. Some of them are of a scirrhus and cancerous nature, and others are simply large growths of flesh. The oftenest of anywhere they make their appearance in the nose; sometimes in the uterus and vagina. They have been known to grow so large as to fill the whole nose, to push aside the partition between the nostrils, and to prevent entirely the passage of the air; the nasal bones are forced from their natural position, and a frightful deformity is the consequence.

Polypuses are commonly removed by means of a ligature, which, being drawn tight around the neck of the tumor, in a few days destroys the circulation, and the polypus drops off. In some instances where they lie within reach, they may be removed by the knife. It is said that polypuses in the nose have been destroyed by the use of a snuff, made of equal parts of the blood-root, finely powdered, and calomel. Polypuses of the uterus have been known to be expelled spontaneously. The double canula is the instrument with which the ligature is put on.

Practitioners must have a care that they do not mistake a polypus for an inversion of the uterus, since these tumors sometimes grow so large as to descend through the vagina.

POLYSARCIA—Fatness, Corpulency.—See *Corpulency*.

POPPY—*Papaver Somniferum*.—The white poppy, which may be cultivated in every garden, is an invaluable domestic plant. A decoction of the poppy may be made to answer many of the purposes of opium itself. In the diseases of young children it is far preferable. The leaves, stalks, and heads, are all possessed of the narcotic principle. Poultices made with a decoction of this plant are excellent applications to assuage pain and allay anguish, in cases of cancer, ulcers, and chronic inflammations. The poppy tea may be taken in hysterics, painful menstruation, dysentery, diarrhœa, cholera morbus, nervous headache, toothache, earache, coughs, consumption, and, in general, any painful disease where there is not a high degree of inflammation and fever.

POTASH—Potass.—This alkali is obtained from wood ashes.

The ashes are first leached, by which the potash is dissolved in water, or formed into a lye. The lye is then poured into iron pots, and boiled down or evaporated by heat. The potash is left in the pots, which, after cooling, becomes a solid mass.

The caustic potash, used to destroy proud flesh, tumors, and excrescences, is made by taking a quantity of potash, dissolved in water, and evaporating it in a covered clean iron vessel, until the water is boiled away. The potash is now about the consistence of oil, and must be poured out upon a smooth iron plate. It must be divided into small pieces before it hardens, and put up in well-stopped phials.

POTATO FLY—*Lytta Vitata*.—The potato fly of the United States very nearly resembles the Spanish fly. It is smaller, however, and of a very different color. Its head is a very light red, and belly ash-colored, in which is found a hard, white substance, about the size of a grain of wheat. It is from four to six lines in length, and from one to two lines in thickness. The fly makes its appearance on the vines in the last of July and first of August. They collect in large quantities, and may be caught by shaking them off into hot water. When dried in the sun they are fit for use. Powdered, sifted, and mixed with salve or cerate, they will draw a blister like the Spanish fly. They have the same effect upon the kidneys, in increasing the flow of the urine and causing strangury. The fly is not inferior in point of efficacy to any exotic species, and may, in time, supplant the Spanish fly. Indigenous plants and insects have been too much neglected by us, and their medicinal properties but imperfectly and superficially investigated. Many medicines, doubtless, remain to be discovered, and many new properties to be found in old remedies.

POULTICE.—The best poultice for an inflammation, or for any green, raw, angry, or ulcerated surface, is made of white bread or rye meal and hot water. It is the best for this reason, that it is the simplest and most solvent. Water is perfectly evaporable, and mixes the most readily with the humors of the body. It should be made very smooth and soft, and never covered with oil or grease, as that forms an impervious layer between the poultice and the sore part. A thin piece of muslin or gauze may be laid over it, to prevent its sticking to the surface.

The flax-seed meal poultice is preferred by many; but as that contains an oil which chokes up the pores of the skin, like other oils, it has never appeared to us equal to the simple bread poultice.

POWDERS.—Almost all the dried barks, roots, and leaves of plants are capable of pulverization, and may be taken in the form of a powder. Many substances lose their virtue by being powdered and kept for any length of time, such as fixed alkaline salts, aromatic plants, and volatile alkalies, such as the salts of harts-horn, etc. Jalap, ipecac., lobelia, Peruvian bark, cream of tartar, calomel, aloes, myrrh, opium, sal nitre, and a host of other substances, operate the best in form of powder. Tough, tenacious substances, like opium and camphor, require some other coarse and

granular substance to be ground with them, to divide and tear them to pieces. Opium may be powdered with the prepared chalk, and the gum camphor with loaf sugar.

PREGNANCY. — There is no one sign by which it can certainly be known that a woman is pregnant, until the motion of the fœtus can be felt, which usually occurs at the end of about four and a half calendar months after conception; nor is there any combination of symptoms by which this condition is positively indicated, if this sign be wanting. By taking into consideration, however, a number of symptoms, an opinion may be formed that will generally prove correct. The first and most certain sign of pregnancy is a suspension of the menses or monthly evacuation. If a woman has previously been regular, is in tolerably good health, and knows of no other very evident cause of the cessation, this sign will seldom be deceptive. Some women continue to be regular during pregnancy, and a suspension of the menses sometimes occurs without any obvious cause; but these are rare cases, and are only exceptions to the general law. A fulness, tenderness, and sudden growth of the breasts, is a sign of considerable value, when taken in connection with the former, but it is not to be depended upon when considered by itself. It is not unusual for the breasts to be painful even in the first months; this, however, happens so frequently, and especially about the time of the monthly discharge, that it can hardly be reckoned among the signs of pregnancy. A secretion of a little watery milk is thought by some to be a sure indication; we know, however, from personal observation, that it is not infallible, as women sometimes, though rarely perhaps, have this secretion in the unimpregnated state, and in fact those who have never given birth to a child. The color of the areola, or circle around the nipple, is perhaps one of the surest signs, except the first, when particularly observed and compared with the color in the same individual when pregnancy does not exist. This circle is much darker in some persons than others, and consequently it is only by comparing the color at different times, in the same individual, that any judgment can be formed from it. Very early in pregnancy the areola grows darker-colored and enlarges in circumference, which we are not aware is produced by any other cause.

Occasional faintness, a shortness of the breath, a sense of fulness in the lower part of the abdomen, a bearing down, and a difficulty in voiding urine, frequently occur in the early months; but a symptom of much more importance is a periodical sickness at the stomach, and vomiting. This generally comes on in the morning, on first rising out of bed, though it may come on at any time in the day, and is sometimes almost constant. A capricious appetite, longings and antipathies, and an unnatural irritability of temper, are not unfrequent symptoms, and though of little importance separately considered, may strengthen an opinion formed from other signs. Disturbed sleep, frightful dreams, nervous pains in different parts of the body and limbs, toothache, and a perturbation of the mind, are occasional symptoms.

When a woman becomes pregnant while nursing, the secretion of milk is diminished, and its quality deteriorated, and the child becomes indisposed, and emaciates. To briefly recapitulate,—if the menses are suspended, the breasts enlarge, the areola grow darker colored, and there be periodical sickness and retching, there will be but little doubt of the existence of pregnancy, but it will require the motion of the fœtus to render it positive.

The natural duration of pregnancy has, by accurate observations, been ascertained to be nine calendar months, or thirty-nine weeks and one day. A variety of circumstances may vary this term a little, but all considerable deviations must be considered as accidental and unnatural. The first perceptible motion of the fœtus, or quickening, is usually observed about four and a half months from conception, and the same length of time previous to the woman's confinement. It probably frequently falls short of this time a few days, and sometimes perhaps several weeks. Quickening unusually early, as well as the coming on of labor a few days before the expiration of the ordinary term of nine months, may possibly be owing to an unusual precocity of the fœtus.

The most common and troublesome diseases of pregnancy are heartburn, sickness at the stomach and vomiting, dyspepsia, diarrhœa, constipation, bearing down of the womb, difficulty of voiding urine, jaundice, shortness of breath, faintness, toothache, salivation, pain in the breast and in the right side, rigidity or tightness of the abdomen, false pains, and turbulency of the fœtus. None of these diseases are of a dangerous tendency, and most of them may be treated upon general principles, except that those medicines which have a specific action upon the womb, and are liable to occasion a miscarriage, must be avoided. Heartburn, sickness, vomiting, and dyspepsia, are most successfully treated by a well-regulated diet, due attention to the state of the bowels, and the occasional use of those medicines that arrest vomiting, called anti-emetics. The laxatives most appropriate in these cases are, calcined magnesia, fluid magnesia, lenitive electuary, Rochelle powders, Epsom salts, castor-oil, and extract of butternut. Whichever of these medicines is taken, it should be in small doses at a time, and a laxative effect only should be produced. Figs, prunes, and laxative food and herb teas, will often be sufficient, and supersede the necessity of resorting to medicine. To allay the sickness and vomiting, a quarter of an ounce of calcined magnesia, and as much super-carbonate of soda, may be dissolved in half a pint of cold water, a little essence of cinnamon and loaf sugar added, and a table-spoonful or two taken several times a day, and particularly when the sickness is most distressing. The following is an old, established remedy for the same purpose: mix one drachm of calcined magnesia, one fluid drachm of the water of ammonia,—aqua ammonia,—and three ounces of cinnamon water with five and a half ounces of pure water. The dose of this mixture is one or two table-spoonfuls. It may be taken at any time when the severity of the complaint may require. The soda-powders and other effervescing mixtures, taken

in small draughts are also appropriate and excellent remedies. Should there be diarrhœa, the chalk mixture may be tried; the syrup or tincture of rhubarb, in small doses, several times a day, with the addition of a few drops of laudanum, may be useful. The red raspberry leaves, crane's bill, rhatany and marsh rosemary, are also appropriate. The difficulty of voiding urine will be relieved by a free use of a solution of gum arabic, and infusion of upland cranberry, except there be a bearing down of the womb, in which case some manual assistance may be necessary. It is seldom of the least benefit to extract a tooth for the toothache in pregnancy; this, however, may depend upon the condition of the tooth, and should be left to the decision of a physician or dentist. The pain of the tooth may be mitigated by the application of laudanum, anodyne balsam, or the smoke of grated nutmegs, drawn through a pipe. For rigidity of the abdomen there is nothing better than frictions with sweet oil or lard. The pain in the side, which is commonly most troublesome from the fifth to the eighth month, will be benefited by light exercise, an easy state of the bowels, and frictions with a liniment of camphor and sweet oil, or other warming embrocations. Bleeding, though frequently resorted to, is seldom beneficial in this affection. Swelling of the feet and legs, and of the flesh generally, is very common in the last months of pregnancy. This is a complaint which, though free from danger, is often troublesome and is very hard to cure. It subsides soon after delivery. Frictions and mild laxatives may be beneficial. The daily use of sweet oil or slippery-elm gruel, in quantities sufficient to keep the bowels regular, relieves many of the disagreeable symptoms of the last months, and may in some degree contribute to an easy labor.

PREPUCE.—The foreskin or membrane which covers the glans penis and clitoris.

PRICKLY-ASH—Toothache Tree—*Aralia Spinosa*.—The root, berries, and bark of the prickly-ash are all medicinal. They excite a gentle sweat, and often succeed in curing the rheumatism. The tree is about twelve feet high, and found in the Southern States. The berries are placed in a hollow tooth in case of toothache. A tincture or infusion of the berries is often used in violent colic. It is a warming stimulant.

PRIMÆ VIÆ.—This expression signifies the first passages of the body, which are the stomach and bowels. The second passages are the lacteal vessels, and the third the blood-vessels. The food goes through all these passages, before it is prepared to nourish the body.

PROLAPSUS ANI—Falling of the Rectum.—See *Falling of the Rectum*.

PROLAPSUS UTERI—Falling of the Womb.—See *Falling of the Womb*.

PROSTATE GLAND.—A glandular body, situated between the neck of the bladder and the urethra. It is in the shape of a heart, firm, and large. It often becomes inflamed and ulcerated.

PROTEINE.—A product of the decomposition of albumen, fibrine, and caseine. Says Liebig, in his *Animal Chemistry*, "When animal albumen, fibrine, and caseine are dissolved in a moderately-strong solution of caustic potash, and the solution is exposed for some time to a high temperature, these substances are decomposed. The addition of acetic acid to the solution causes, in all three, the separation of a gelatinous, translucent precipitate, which has exactly the same characters and composition, from whichever of the three substances above-mentioned it has been obtained." This principle is regarded by Mulder, its discoverer, as the base of the blood and of all the animal tissues. Both animal and vegetable albumen, fibrine, and caseine, are compounds of it.

PRUNES—*Prunus Domestica*.—These are the fruit of the French prune or plum tree. The variety of plum-trees is very extensive. The plums, when dried, are called prunes. Great quantities are imported from Europe, particularly from France, which are the best.

Prunes are cooling and laxative, nourishing, and palatable. Eaten freely, they relieve costiveness without impairing the tone of the bowels. In hot weather, they lessen the heat of the system and improve the appetite.

PRUSSIC ACID—*Acidum Hydrocyanicum*.—This acid may be obtained by a chemical process from the prussiate of iron. It is a colorless fluid, of a strong smell, resembling peach-flowers, and a pungent, sweetish taste. It may be obtained from many vegetable substances.

Dose for an adult one drop, twice or three times in twenty-four hours, in distilled water. It is used in asthma, whooping cough, croup, consumption, and several spasmodic diseases, such as locked jaw, hysterics, and convulsions.

The prussic or hydrocyanic acid must be used with the greatest caution, as it is one of the most fatal and sudden poisons. It is a direct sedative or anodyne. It must be given in distilled water, as any other liquid will decompose it.

PSORA—The Itch.—See *Itch*.

PSORIASIS—Salt Rheum.—See *Salt Rheum*.

PUERPERAL FEVER—Child-bed Fever.—See *Child-bed Fever*.

PULMONARY.—Anything which relates to the lights or lungs. The consumption is a pulmonary disease; so are the asthma, and the peripneumony.

PULSE.—The pulse is caused by the beating of the heart and arteries. It may be felt in any of the arteries of the body, but most conveniently in the wrist. Sometimes it is more perceptible in the temporal artery,—the radial artery being small. The radial artery will sometimes divide, and the larger branch run upon the outside of the radius. In this case, the pulse in the usual place will be faint when the circulation is actually strong and vigorous. The physician must guard against this mistake, as

the patient may be thought to be very weak, when there is nothing the matter with him. We have seen several instances of this nature.

The pulse is the truest index we have of the force and the rapidity of the circulation. In nearly all inflammatory diseases, the pulse is large, full, quick, hard, and forcible. In fevers, it is full, hard, and quick or frequent, though not so full and forcible as in inflammations. In the continued fever, the pulse will beat from ninety to a hundred and twenty strokes in a minute. In general, the quicker the pulse, the more severe and dangerous the disease.

When there is not much strength in the system, from whatever cause it arise, the pulse will be small, quick, and soft. The quantity of blood in the system may be pretty well told by the size and feel of the pulse.

The pulse of a grown person in health is estimated, in general, to be seventy-three beats in a minute. If it rises above eighty, it is supposed to indicate some degree of fever, or some disorder of the system. Some people have a remarkably slow pulse in health. We have seen one person whose pulse was never more than forty in a minute.

An intermitting pulse is supposed either to indicate some disorder of the heart, a great state of weakness, the approach of death, or some nervous affection. By intermitting, is meant that the pulse beats a few times, and then stops a beat or two, and begins again. A mere nausea or sickness at the stomach, either from disease or medicine, will cause an intermitting pulse. An intermitting pulse attends dropsy of the heart, of the chest, and of the brain. Some people, however, will have an intermitting pulse nearly their whole lifetime without any apparent disease, unless it be some slight nervous affection. For the pulse of different ages, see *Circulation*.

PURGATIVE.—A medicine which operates upon the bowels so as to produce a number of discharges in a day, or increase the natural motion.

PURPLES—**Purpura.**—This disease manifests itself by a peculiar eruption upon the skin, which, in the course of its progress, assumes more or less of a purplish appearance,—from which circumstance it takes its name. It has usually been classed among diseases of the skin; but as the purple spots are observed in almost every texture of the body, and especially upon the mucous and serous membranes, it appears to be a disease of the system generally, rather than an affection peculiar to the surface. The spots, which have been called *petechiæ*, *vibices*, and *ecchymoses*, have two distinct and very different appearances, both of which may appear at the same time, and are generally associated together. One kind of these spots (*petechiæ*) are small, round, not at all elevated, and varying in size from the most minute point to a line and a half or two lines in diameter. On their first appearance, they are of a bright-red color; but in the course of a day or two

they assume a purplish or livid appearance, and when about disappearing, become of a yellowish-brown color. The other variety of spots almost precisely resemble a bruise in the flesh, produced by some external violence. These patches, or ecchymoses, are formed by the coalescence of many small petechial spots; and as they consist of an effusion of blood under the skin, resemble, in this particular, a bruise in their nature.

The eruption is usually unattended with fever, though in some of the varieties and under some circumstances, slight febrile symptoms are observed. It usually appears first upon the legs, then upon the thighs and arms, and lastly upon the body,—the face and neck, in a majority of cases, remaining unaffected.

What renders this disease important in a practical point of view, the circumstance indeed from which all the danger arises, is, its liability to be attended by profuse hemorrhages, or bleedings, from different parts of the system,—and which, as they sometimes occur from the internal organs of the body, prove in some instances uncontrollable.

Purpura has often been confounded with scurvy, and by some is thought to be identical with it; but we believe it is generally considered by the latest and best authorities to be a distinct disease. It differs from it in its causes, time of attack, and treatment. Scurvy is generally produced by the deprivation of sub-acid fruits, and esculent vegetables, and commonly yields to a liberal allowance of these articles; whereas purpura has not been found to be produced by such deprivation, or to be remedied by their administration. The latter is most frequently observed in summer and autumn,—the former in winter and spring. The treatment of these two affections, though alike in some particular instances, is widely different in a large proportion of cases,—purpura often requiring depletory or antiphlogistic remedies, which are wholly inadmissible in the treatment of scurvy.

The condition of the system which is thought to give rise to this disease is an extreme thinness of the blood, and a weakness and relaxation of the capillaries, or minute vessels, allowing them to give way, from the ordinary impetus of the blood. To this may perhaps be added, in some instances, an increased action of the heart and arteries.

For the sake of clearness, purpura is divided into four varieties: first, purpura simplex, or simple purpura; second, purpura urticaria, in which the eruption resembles urticaria, or nettle-rash; third, purpura senilis, or the purple spots of old people; and fourth, purpura hemorrhagica, or the bleeding purples.

In simple purpura, the spots or petechiæ “are most numerous on the breast, and on the inside of the arms and legs, and are of various sizes, from the most minute point to that of a flea-bite, and commonly circular. They may be distinguished from recent flea-bites, partly by their more livid or purple color, and partly because in the latter there is a distinct central depression, the redness around which disappears upon pressure.

The most characteristic symptom of the eruption, which distinguishes it from all inflammatory eruptions upon the skin, is the impossibility of effacing it by the pressure of the finger, under which the spots or pimples in inflammatory affections readily disappear.

This variety of the purples is, in itself, of but little importance, being attended with no constitutional symptoms, and requiring little or no medical treatment; the only danger attending it being its liability to run into the more dangerous form of the disease,—the bleeding purples.

The second variety,—that which on its first appearance resembles nettle-rash,—is commonly attended with much the same train of febrile symptoms as precede or accompany attacks of the mild, eruptive fevers. It is unattended with danger, and requires nearly the same treatment as a mild febrile attack.

The third variety,—*purpura senilis*, or the purple spots seen in old people,—is an affection unattended with danger, requiring no treatment, except, perhaps, occasionally bathing with some mildly stimulating lotion.

The fourth and last variety,—bleeding purples,—is a much more grave, and, fortunately, a somewhat rare disease. It not unfrequently proves fatal under the most approved modes of treatment. This form of the disease, in addition to the purple spots, is attended with bleeding from different parts of the system. The bleeding most frequently occurs from the nose, mouth, stomach, and bowels, and the womb; but large quantities of blood are sometimes let loose into the cavities of the body, which may cause sudden death; and the slightest wound in the flesh is often attended with intractable bleeding.

It is not unusual for *purpura hemorrhagica* to be either preceded or accompanied by general indisposition. "There may be lassitude, pains in the limbs, pains in the body, and reluctance to take exercise; although it may appear suddenly, in the midst of apparent good health. It is always accompanied by extreme debility and depression of spirits; the pulse is commonly feeble, and sometimes quickened; and heat, flushing, perspiration, and other symptoms of slight febrile irritation, occasionally attend."

In some patients, deep-seated pains about the precordia, and in the chest, loins, and abdomen, have been felt. In some cases, there is cough, tenderness of the stomach, and a constipated or irregular state of the bowels. When the disease has continued long, attended with excessive discharges of blood, syncope or fainting often occurs, the patient becomes sallow and much emaciated, and some swelling of the lower extremities and other parts appears.

The duration of this affection is irregular and uncertain, varying from a few days to several weeks or months; generally, however, in acute attacks, a restoration to comparative health, or an extinction of the vital powers from repeated losses of blood, will occur in from two to four weeks.

It is most likely to occur in individuals of a delicate or enfee-

bled habit of body, and is thought to be caused by low, damp, and confined habitations, scanty food, excessive labor, anxiety, grief, fatigue, and watching. It may supervene upon long-continued or chronic diseases, and has been known to be produced by intemperate drinking, salivation with mercury, and the too frequent use of alkalies. It should be observed, however, that it may occur under circumstances entirely opposite to those enumerated,—among the well-fed and affluent, and without any assignable cause.

Treatment.—Very different and even opposite modes of treatment have been, at different times, and by different authors, recommended for the cure of purpura, all of which have proved to some extent unsuccessful, and the practice is still somewhat unsettled. The earlier physicians depended principally upon cordials, stimulants, and tonics, treating the disease as one of pure debility; while the moderns have taken a different view of its nature, and have treated it by the moderate use of the lancet, purgatives, and other depletory measures; and, perhaps, with more general utility. It appears probable to us, that no general plan can be laid down that would not be liable to many exceptions, and that it should be treated according to the symptoms present in each particular case.

In the milder and uncomplicated forms of the complaint but little is required to be done;—to obviate febrile symptoms by the use of cooling cathartics, such as Rochelle or Epsom salts, cream of tartar, &c., a spare liquid diet, and the use of sub-acid drinks, with occasional bathing, with mildly stimulating lotions, such as alcohol or vinegar and water, or a weak solution of the nitro-muriatic acid, will constitute the only treatment necessary. In the treatment of the bleeding purples, the object is threefold;—first, to arrest the hemorrhage; second, as far as possible to remove the tendency to bleeding; and, thirdly, to sustain the strength of the patient.

The first of these indications, to check the bleeding, is to be fulfilled by the local, and, when necessary, general use of astringents. Among the astringents for this purpose, the tannic acid holds a preëminent rank, as uniting great potency with the most perfect safety, and conveniency of application. We have used this article in the bleedings in purpura, and in other hemorrhages, with unprecedented success. It may be applied locally in substance, or in a strong solution in water, in bleeding from the nose, and other parts to which an application can be made, either by means of a swab or lint, or by injections. In bleedings from the stomach, intestines, and other internal organs, it may be given internally, in from one to three grain doses, in the form of a solution, repeated at short intervals, as the case may require. If this cannot be obtained, or should not succeed, solutions of white vitriol or sugar of lead, or the powdered catechu, or kino, tincture of rhatany, or some other astringent, may be substituted; the nitrate of silver, and the muriated tincture of iron, are also among

the most valuable remedies for this purpose, and may succeed even when other means have failed.

The second indication, to remove the tendency to bleeding, may be fulfilled by removing plethora, or over-fulness of the vessels, when present, by diminishing the action of the heart when excessive, and by promoting a healthy action of the different organs of the body. If the patient have previously been in good health, and if the amount of blood lost by spontaneous hemorrhage have been small; if the tongue be coated, the skin preternaturally warm, the pulse full and increased in frequency, a moderate bleeding will undoubtedly be serviceable. It should be observed, however, that bleeding must be practised with great discretion. With the view of promoting healthy secretions from the stomach, bowels, liver, and other organs concerned in the digestive function, cathartics may be used with a prospect of beneficial effects. Of this class of medicines, rhubarb, calcined magnesia, castor-oil, Epsom salts, and cream of tartar, are perhaps the most suitable; senna and other drastic purgatives are objectionable, and calomel and other mercurials, though recommended by high authority, we deem of doubtful utility. A moderate dose of rhubarb, or rhubarb and magnesia, or Epsom salts, may be given every other day, with the effect of promoting the healthy action of the bowels, and improving the condition of the general system. Should the secretion from the kidneys be deficient, or unnatural, that function should be restored by the use of the upland cranberry, cleavers, or parsley; and should there be sufficient heat and arterial action to warrant it, the cream of tartar, nitrate of potash, and digitalis, may be cautiously given. It happens, however, in a large proportion of cases of the bleeding purples, that the system is so depressed, and the vital principle so nearly extinguished, by diseased action and the loss of blood, that stimulants and tonics are indispensable. To arouse the system in cases of extreme exhaustion, camphor, Hoffman's anodyne, wine, or other stimulants, should be employed according to circumstances; and, to sustain and give tone to the system, quinine, the mineral acids, the muriated tincture or the syrup of the iodide of iron, should be administered at short and regular intervals.

While the active stage of the disease continues, the system should be supported with light and nutritious drinks, such as toast-water, rice and arrow-root gruel, and whey made either with wine or alum, according to the indication in the case.

During convalescence, and in the intervals which may occur between the different attacks of bleeding, the system should be replenished, and the strength promoted by a free circulation of air, and a healthy location, moderate exercise, and a nutritious and well-regulated diet, consisting of a fair proportion of animal jellies, small quantities of roasted white meats, and a temperate use of generous wine.

Purpura hemorrhagica is a malady of so grave and intractable a character, that but little can be done in a domestic way, with a

prospect of benefiting the patient. The services of a competent adviser, therefore, should never be dispensed with when attainable, by whose prescriptions the domestic treatment should be wholly regulated.

PUS.—This is a whitish, cream-like matter, which forms in ulcers and the suppuration of inflamed parts; or, in other words, it is formed when inflamed parts mature. It is commonly called matter. When pus or matter is healthy, it separates readily from the surface of the sore; the granulations underneath are small, pointed and red; the matter is of a white color, has a mawkish taste, and when cold is without smell, but when warm has a peculiar smell. It sinks in water. Examined with a microscope, it consists of grains or globules, and a transparent fluid. It is less tenacious than phlegm or mucus, and more opaque.

Unhealthy matter is watery and flaky, as may be seen in scrofulous ulcers. In some ulcers, it is of a blackish or greenish color, and a fetid smell. A good constitution, in general, produces good pus. Suppurations in the extremities, which are at a distance from the centre of the circulation, produce a poorer kind of pus than when situated nearer the trunk of the body. Maturation commences in wounds in about four days after they happen; never sooner than two days.

PUSTULE.—A pustule is a little round, red, sore pimple, which contains matter or pus. It has several different shapes. Some pustules, as in the small pox and cow pox, are round, and flat upon the top; others are pointed, as in the blotched face. Some are oval, and others are globular. Some pustules contain a watery matter, and others pure pus. Some are painful, and others merely sore to the touch. They are mostly confined to the surface of the body. Each pustule is a separate inflammation, although they sometimes run together. Some pustules terminate in a scab, others in a scurf, and some, again, are resolved without any organic change in the texture of the part or spot. A pustule is seldom larger in circumference or diameter than a five-cent piece.

PYLORUS.—The lower orifice of the stomach. That portion of the bowels called the duodenum commences at the pylorus.

PYREXIA.—The literal meaning of this term is a habitual heat, but, is commonly used to denote fever in general. It implies an increase of heat, a diminution of strength, a frequency of the pulse, thirst, a gastric affection, and a general disorder of the functions of the mind and of the body.

PYROSIS.—Water-brash.—The discharge of a watery, ropy fluid from the stomach, attended with heart-burn. See *Heart-burn* and *Water-brash*.

Q.

QUARTAN AGUE.—This is a form of the fever and ague or intermittent fever, in which the fever fits or paroxysms happen every fourth day.

QUASSIA.—A bitter wood which comes from South America and the West Indies. The bark and the root of the quassia are as bitter as the wood. It is a white wood, and when cut into chips, looks like the ash wood. It has an intensely bitter taste, without astringency, or any peculiar smell. Boiling water extracts from a sixth to a ninth part of the weight of the wood. It is a pure bitter, and one of the best which we possess. Like the Peruvian bark, it has the power of curing the fever and ague. Its medicinal virtues are those of a tonic, stomachic, antiseptic, and febrifuge. In this country it is administered very much in the debility which follows our slow or continued fevers, the small pox, and typhus fever. In cases of a weak stomach, it is a valuable remedy. It is very suitable in nervous diseases, and in the weakness which often attends menstruation, or a loss of blood. It may be given in almost any disease where there is not a high fever and acute inflammation.

The way in which it is commonly taken is in the form of a tea or infusion. Twelve ounces or a pint of boiling water may be poured upon three or four drachms of the quassia chips or powder, and of this tea, one or two table-spoonfuls may be taken at a dose, several times in a day.

QUICKSILVER—Mercury.—This is a liquid metal. In its pure state it has a shining lustre like polished silver. If exposed to the air for a length of time, a rust or oxide collects upon it, of a dark-gray color. In a great degree of cold, forty degrees below zero, it becomes solid, like melted lead when cooled. It expands by heat, which makes it a suitable index, in the tube of the thermometer, of the temperature of the atmosphere. Quicksilver is sometimes found pure in the earth. There are mines of it in Peru, Spain, Hungary, and France. It is most commonly combined with sulphur, from which it is separated by heat or smelting. In 1497, this metal was introduced into medicine as a sovereign remedy for the venereal disease, and has ever since maintained its reputation. The pure metal is never used; it must be converted into an oxide or salt before it is suitable to be introduced into the system. When a handful of it is thrown upon the floor, it separates into round globules about the size of shot.

QUININE—Sulphate of Quinia.—This medicine is obtained by a chemical process from the Peruvian or cinchona bark. In this salt all the virtues of the bark are concentrated. It consists of fine, silky, flexible crystals. It looks like small flakes of snow. Its taste is intensely bitter, and retains the flavor of the bark. It is a compound of sulphuric acid or oil of vitriol, and a chemical

principle of the bark called quinia. In appearance the quinia and the sulphate of quinia are very much the same; both are in the form of a white powder. The pure quinia is now seldom used, although it possesses equal efficacy, and is the pure essence of the bark.

The nitric, muriatic, and the citric acids, all form salts with the quinia, which possess about the same properties with the sulphate.

In all cases where the Peruvian bark was formerly employed, the quinine is now used as a substitute. It is one of the most valuable improvements in the art of medicine. It is an invaluable tonic.

The common dose is one grain, given one, two, three, or more times in a day, as the case may require. A child a year old may take half a grain, once or twice a day. In some cases, it is given to adults in two, three, and four grain doses. It may be mixed with molasses, syrup, jelly, or water. As good a way as any is to make a tincture of it, by dissolving it in new rum or diluted alcohol. A drachm of it may be dissolved in eight ounces of new rum, and taken in the dose of a tea-spoonful at a time.

No medicine possesses the power of strengthening the digestive organs and the system at large in so great a degree as the quinine. In the cure of the fever and ague, no remedy can be compared to it, and in almost every other disease requiring a tonic, its virtues are equally effectual.

QUINZY, OR QUINSY—Inflammation of the Tonsils—Sore Throat.—See *Sore Throat*.

QUOTIDIAN AGUE.—A daily ague, or a form of the intermittent fever where the chills and fever occur once in twenty-four hours.

R.

RABIES—Madness—Hydrophobia.

RACHITIS.—The systematic name for rickets.

RADIUS.—The inner bone of the fore-arm. It extends from the elbow to the wrist, and has a rotating motion.

RAISINS.—The raisins which we import are dried grapes. They have never been preserved in this country, as we are aware of. The grape, of which the raisin or plum is made, when fully ripe, is a wholesome and luscious article of food. It is cooling, laxative, and diuretic. In fevers, consumption, and inflammatory diseases, they are appropriate and beneficial. The skin should not be eaten. When raisins,—the dried fruit of the grape,—are eaten, they should either be chopped fine or the skin taken off. The dried fruit is less acid, but possesses the same medicinal qualities as the grape itself.

RANULA.—A tumor or white bladder under the tongue. See *Frog*.

RASH.—An eruption on the skin. See *Nettle Rash*, *Canker Rash*, and *Heat Eruption*.

RATTLE-SNAKE ROOT—*Polygala Seneca*.—This plant is commonly called *seneca*. It grows in all parts of the Union, but, in most abundance, in Virginia and Pennsylvania. It is a perennial, crooked, jointed root, resembling very much the tail of a rattle-snake, after which it is named.

The *seneca* root is an active stimulant, expectorant, and diuretic, and sometimes will operate as an emetic and cathartic. It is said to cure the bite of the rattle-snake. In the croup and other inflammatory affections of the throat and lungs, it is ranked among the best remedies.

The manner of using it is to take half an ounce of the bruised root, steep it in half a pint of water, in a covered vessel, until it is reduced to a gill; of this, a table-spoonful is to be given every hour, or half hour, as the case may require.

This root has been found useful in the decline of pleurisy, peripneumony, in coughs, and the asthma. Dr. Chapman, of Philadelphia, has found it of signal service in obstructions of the menses, administered to the extent of four ounces of the decoction in the course of the day, increased as the menstrual effort is expected.

It acts powerfully upon the salivary glands, and the mucous membrane of the throat. The mere chewing of it causes a sudden flow of the saliva. There can be no doubt of its efficacy in inflammatory diseases of the throat.

RECTUM.—When the large portion of the intestines or bowels has reached the pelvis, it runs in a straight line, until it terminates in the anus. The part which runs through the pelvis, being the lowest portion of the bowels, is called the rectum. It is to this portion of the bowels that injections are applied. Its motion is much slower than that of the other parts of the intestines.

RED GUM.—The red gum is a rash or humor which comes out on infants soon after they are born, most commonly within a month after birth. How it came to be called the red gum, we are unable to say. It makes its appearance before the gums become red and inflamed from teething, and we have never known it to be attended with any affection of the gums whatever. It sometimes coexists with canker, and this may have originated the name.

The red gum consists of a multitude of little pimples which come out upon the face, neck, and sometimes upon the body and limbs of the child. The pimples will sometimes have watery heads, or be filled with yellowish matter. The eruption, like all eruptions upon the skins of children, has been supposed to be an effort of nature to throw off something hurtful from the body, and, therefore, should not be repelled by any external applications.

But be this idea true or false, it fortunately happens that the humor seldom or never requires any local treatment. We never could see why there may not be a primary disease of the skin as well as of the stomach or bowels.

Domestic Remedies.—Half a tea-spoonful of the calcined magnesia in a little milk, or a tea-spoonful of castor-oil, is, in general, all the medicine which is required. If the skin be hot and dry, it should be bathed with warm water, and the child should take a little warm catnip tea to make it perspire. The eruption usually dies away in the course of two or three days. If the stomach of the child is sour, a julep of prepared chalk should be given it. If there should be any sickness at the stomach, ten or fifteen drops of the wine of ipecac. should be given, after which, as many drops of Godfrey's cordial may be taken.

RED PRECIPITATE—Red Oxide of Quicksilver.—The red precipitate of mercury is formed by dissolving quicksilver in aquafortis, and heating the evaporated matter in a glass cucurbit until it is converted into red scales. It is used chiefly as an escharotic. It is mildly corrosive, gradually destroying fungous or proud flesh, without pain or uneasiness. It combines all the healing properties of a mercurial with those of a safe and sure caustic. The proper way of using it is to reduce it to a very fine powder, and sprinkle it upon the sore, ulcer, or cancer, until the surface is covered; if any drops upon the sound skin, it is to be wiped or washed off. There is probably no one caustic used so much as this, or with so much success. It is stimulating, healing, and cleansing. Applied to the hardened edges of dead, offensive, unhealthy sores, it soon improves their appearance and produces a healing process. New granulations appear, and the life of the part is renewed. Chancres, dressed with it daily, and washed with a lotion made of sugar of lead, dissolved in water, seldom fail to heal. As well known as this escharotic is, it is often vended in disguise as a remedy for cancers. Surely there is need that the popular mind should be better informed, in order to avoid imposition.

REFRIGERANT.—Medicines which lessen the heat of the body, such as salts, nitre, Rochelle powders, ice, soda-water, and the vegetable and mineral acids.

REMITTENT FEVER.—In this country, the remittent fever is called the bilious fever. See *Bilious Fever*. It is called remittent because the fever sensibly abates, every day or two, and returns again with equal violence.

RENAL CAPSULES—Supra-renal Glands.—These are two small glandular bodies of a triangular figure, situated near each kidney. They have no excretory duct, and therefore can secrete nothing but blood and lymph, like the spleen. They are much smaller than the kidneys, and their cavities are filled with a liquid of a reddish color.

RESOLUTION.—The dispersion of an inflammation, either by the use of medicines, or by some natural operation. The red-

ness, swelling, pain, and heat, all subside without maturation or gangrene.

RESPIRATION—Breathing.—See *Breathing*.

RETE MUCOSUM.—The mucous coloring matter of the skin. It occupies a space between the cuticle or scarf skin, and the cutis or true skin. In people of a dark or black color this mucous membrane is dark or black, and in people of a lighter complexion it is light. Whatever be the cast of the complexion, it originates from this substance. It is known as the middle layer between the dermis and the epidermis.

RHATANY—*Krameria Triandra*.—The rhatany root comes from Peru, where the plant grows in great abundance. It is of a dark-brown color, and has a bitter and very astringent taste. The pieces vary in diameter from the size of a quill to an inch in thickness. The root makes a reddish-colored powder. Rhatany is a gentle tonic and a powerful astringent. In chronic bowel complaints, particularly diarrhœa, it is equal if not superior to catechu. In passive bleedings from the lungs, stomach, and womb, it is equally efficacious. The dose of the powdered root is from twenty to thirty grains. It may be used in the form of infusion or tincture as well as in powder. It is sometimes used as a wash to spongy gums and the eruptions in scurvy.

RHEUMATISM.—There is no disease with which the human constitution holds stronger contest than with the inflammatory rheumatism, and yet it is not a dangerous disease. There are two grades of this disease, one of which is acute, and attended with fever, and the other, chronic or lingering, and without fever. Rheumatism of both grades springs very naturally from the climate of New England, and may almost be said to be endemical. It is more or less a disease of all cold and wet climates, but with us it is a standing disease. In the country and in the town, in the high lands and in the low, in the workshop and in the open field, stiff limbs, painful and swelled joints, lame backs and crippled feet, are at all times visible.

The acute rheumatism is known by sharp pains in the joints, muscles, and back-bone; the pain most commonly begins in the joints of the knees ankles, hips, shoulders, elbows, or wrists. Sometimes only one joint, and at others several of the joints, will be affected. In ordinary, one joint will be affected after another until all the large joints have experienced the disease. The affected part usually becomes red, swelled, dry, and hot. The pain is extremely hard, and much increased at night, and by the action of heat. The inflammation,—for the acute rheumatism is neither more nor less than an inflammation of the tendons, the sheaths or white cases of the muscles, and the coverings of the heads of bones,—manifests itself by a general affection of the whole system, by loss of strength, shiverings, heat, thirst, restlessness, inability to sleep, white fur upon the tongue, and a full, hard, quick pulse. The skin, instead of being dry, as in fever and in other inflammatory affections, is generally covered with partial

sweats, and the sweat is always clammy. The painful joints, and the surface for some distance around, are always dry. We believe an inflamed part never perspires. There is commonly little or no headache in this malady, and the stomach is not much diseased. The bowels are costive. The blood which is drawn in the inflammatory rheumatism is always sily.

Although the inflammation of the joints and muscles will often run very high, and manifest much redness, swelling and pain, it rarely ever suppurates. Cases of suppuration and the discharge of matter sometimes happen, but the inflammation commonly subsists for three or four weeks, and then begins to decline, leaving the parts weak, but not disorganized. There is often an effusion of watery or mucous matter in the inflamed joint, which renders it swelled and stiff for a long time; but the motion of the joint, on the cessation of the disease, soon causes this matter to be absorbed. The nature of the parts affected in rheumatism causes a considerable difference between the progress and termination of the inflammation, and the inflammation of other parts and organs. The tendons are not very essential to life, and do not contain red blood. In them, an inflammation runs very slow in comparison with its course in organs which are full of blood, whose vessels are large, and through which the blood moves rapidly. The bloodless cords, like the nails and the hair, being removed from the force of the circulation, are very long in being irritated; and when once irritated, the irritation is as long in subsiding. Some writers have seemed to doubt whether rheumatism were an inflammatory disorder; but if pain, redness, swelling, dryness, and an increased heat of the parts affected, constitute inflammation, then rheumatism must be an inflammatory disease and require an anti-inflammatory treatment. It is a disease produced by cold, wetness, and the wintery vicissitudes of the atmosphere, like other acute inflammations. It attacks the full-blooded and robust, in whom other inflammatory disorders are most apt to occur. The acute rheumatism is peculiarly a disease of middle life; it rarely affects children, and does not often attack the aged. External redness and swelling may not in every instance accompany the disease, and we are not certain that these two appearances are always visible in other inflammations.

The rheumatism is said in some instances to seize the internal parts, the brain, the heart, liver and stomach, and to end fatally, and we think we have seen the disease extend to these organs. In fatal cases of the rheumatism, the inflammation spreads like the St. Anthony's fire, assumes a dark-red color, and small blisters form upon the surface. The pulse sinks, and the surface becomes livid and cold.

The inflammatory rheumatism commonly runs, when not arrested in the commencement, from four to six weeks. In many instances, where one joint after another is attacked with inflammation, the disease will take two or three months in performing its circuit. It is always a favorable symptom to see the disease

moderated and the pain assuaged, by medicines, if there is not an entire cure.

Domestic Remedies. — Sweating in this disease is not only difficult to produce and to keep up, but when we have succeeded in opening the pores, the disease does not appear to be much bettered by it. The part affected never sweats; and the skin does not appear to be the channel by which the inflammation, in this case, is to be subdued. The bowels and the kidneys seem to be the outlets through which the proper evacuations must be made. A person attacked with the inflammatory or acute rheumatism should be confined to a room heated to sixty-five or sixty-eight degrees, upon a soft bed, and not very warmly covered. A dose of salts, senna, castor-oil, thoroughwort, or aloes, should be given, and repeated every day for several days in succession. The sal nitre, in eight grain doses, should be administered every two hours, dissolved in a little water, with a plentiful supply of tepid drink. Any kind of herb tea which will operate upon the kidneys and produce a flow of the urine, will be suitable. The affected joints should be kept bathed with equal parts of vinegar and new rum, or with vinegar and water; but the chill of the liquor must be taken off. Any entirely cold application, or one that is hot, appears to increase the pain and inflammation. A mixture of vinegar and new rum, if kept constantly applied with flannels, and gently rubbed in by the hand, abates the heat, lessens the pain and soreness, and reduces the inflammation. Soft, tepid poultices made of flax-seed meal, rye meal, or white bread, are extremely suitable applications to the inflamed and painful parts and joints. In other kinds of inflammation it is usual to apply lotions of lead-water and solutions of sulphate of zinc; and we regard these washes as very proper, perhaps the most proper of any which can be used. Solutions of lead and zinc should not be used very cold. They should always be raised to the temperature of summer heat. It is an old notion that there is danger in driving the inflammation away, but, perhaps, it is quite as harmless to drive the inflammation away in the rheumatism as in an affection of the eyes or the throat.

Mustard poultices and the volatile liniment are much in use in the rheumatism as local applications, but they seldom do much good. Steaming the joints and the use of the hot bath are sometimes recommended, and may be suitable remedies. The plan of cure, in our opinion, should be strictly anti-inflammatory. Other means will sometimes succeed, but the reduction of the inflammation, by the use of the same means which we employ in other cases of inflammation, is the only rational method of cure, and we believe it is the method which is sanctioned by the most enlightened experience.

The acetate of ammonia, or the carbonate of ammonia dissolved in distilled vinegar or lemon-juice, is a capital medicine, in the inflammatory rheumatism. A draught of it should be taken every two hours.

The diet should consist of water porridge, barley porridge, rice boiled soft, soaked white bread, and bread-water. The drink should be tepid water, lemonade, molasses and water, and soda-water.

For the first two or three days no opium should be given; and if, after that, it is found necessary to resort to it to produce sleep, either the Dover's powder should be given, or the solution of morphine. The Dover's powder is probably the least inflammatory. Where the pain becomes intolerable, it is a better way to bathe the inflamed joints in laudanum, than to charge the system with it, by taking it into the stomach. Hoffman's anodyne liquor will be found a very good substitute for opium, if used in connection with the acetate of ammonia. The inflammation of rheumatism is so long in running its course, that the system commonly depletes itself almost enough before the crisis of the disease, without the use of any violent means in the beginning. Small doses of ipecac. or antimony will often be found useful, more with the view of moderating the circulation and reducing the pulse, than of exciting a sweat, which seems to be for the most part valueless. The tartar emetic, used in rheumatism precisely as it is used in a common continued fever, has, no doubt, a happy effect in shortening the disease.

The disposition of the disease to attack one joint after another, until several or all of the large joints have gone through with the inflammation, has discouraged many from the use of topical remedies. But this is no reasonable argument against their use. We believe that where an evaporation of alcohol, vinegar, ether, lead-water, or a solution of white vitriol, are kept up, they make a sensible impression upon the inflamed parts; and so do soft tepid poultices. Both the heat and the soreness are very much lessened, the vessels are relaxed, and effusions much less likely to take place. The application of evaporable substances to the inflamed joints and muscles, we regard as an essential part of the cure. Hop, poppy, catnip, and motherwort tea, are all very good in this disease. The thoroughwort tea, if used plentifully enough to keep up a drain by the bowels, will answer as well as any physic which can be used. The poppy tea is a very good liquor to evaporate upon the inflamed parts.

Professional Remedies.—As rheumatic inflammation does not often settle upon the vital parts, there is not that indispensable necessity for blood-letting which exists in some other disorders. There is more certainty, also, that the system will reduce itself before suppuration or ulceration takes place in this disease, than in many others. Or if the inflammation should run to suppuration, there is not that danger which would follow from a suppuration of an internal organ. Every physician, however, will follow the path of experience and observation, who abstracts blood in this disease whenever the inflammation is violent and extensive, and the condition of the system will warrant it. To let a full-blooded, able-bodied, and robust subject struggle on with a

violent rheumatic inflammation of several joints, without lessening the quantity of blood, appears to us to be an absurd practice. To be sure, the same thing will be accomplished in the course of a week or two by the force of the disease and the abstinence from food, but the system may be greatly endangered before that time. If the subject has been attacked in full health, and the pulse is full, hard, and quick, a pint of blood should be taken from the arm as early in the disease as it can be done; and if the vehemence of the disease should continue, the subject should be bled a second time on the day but one following. We would not, in general, carry the depletion by blood-letting any further than this, unless it is by the use of cups or leeches. Blisters in the beginning of the disease are commonly of but little service, but after the fever is somewhat abated, they may be employed with great advantage. Calomel, in small doses, continued for three or four days at a time, and then omitted for as many more, is often extremely serviceable in the latter part of the disease. The mouth in no case should be made sore by it. The strychnia, a salt procured from the nux vomica, is said to have been effectual in the cure of the disease, but we have never used it. The veratrine, an alkali procured from the meadow saffron or *colchicum autumnale*, should be tried. Wine of *colchicum* itself we consider one of the most effectual remedies that has ever been used in the cure of inflammatory rheumatism. It should be given, in doses of from thirty to sixty drops, every six hours, until some effect is produced upon the stomach and bowels. Some have recommended the use of opium in large doses, and often repeated, as the best means of curing the disease, but it has never appeared to us compatible with the essential nature of the disease and the inflammatory condition of the system. Opium will ease the pain, and perhaps may not essentially lengthen the disease, but we have ever looked upon the plan with suspicion. In the chronic rheumatism, or in the latter stage of the acute rheumatism, the practice may be more harmless. The use of hot-drops and all stimulating medicines is for the same reason inadmissible. By following the depleting, anti-inflammatory plan, if we do not succeed in curing the disease any sooner, we shall at least use no means which will ultimately injure the system.

The use of quinine is less objectionable, as it is not a direct stimulus, and may operate as a moderator of the fever. The testimony in favor of the use of the Peruvian bark or the quinine is indisputable, but still the plan we have recommended is supported by the highest and most general authority. Where the anti-inflammatory plan fails, it will be perfectly proper to use the quinine, and, perhaps not very improper to try the efficacy of anodynes. Camphor, in combination with the sal nitre, has often been found a useful medicine.

In the use of purgatives we have the highest confidence. Four or five aloetic pills given every night for a week or fortnight, in succession, we have often used with the happiest effect. Under

the influence of this purgative, we have seen the swelling subside, the redness disappear, the heat depart, and the inflammation reduced. We believe the plan is more successful when the disease has passed the acutest period of the inflammation. We have seen the sal nitre, by operating upon the kidneys, produce a similar result.

The *chronic rheumatism*, being an inflammation of a lower grade, and generally without fever, requires some variation in the treatment. In the cure of the chronic rheumatism we can heartily recommend the use of the hot-drops, both internally and externally. Red pepper, mustard, myrrh, and bayberry root, are all suitable remedies in this grade of disease, and have been used from time immemorial. But these remedies should not be used if any considerable fever be present. The chronic rheumatism is sometimes said to be without fever; but this is not the case in all instances. Particular attention should be paid to the dress, by those who are affected with chronic rheumatism. The body should always be kept warm and dry, and, more especially, the feet. The India rubber shoe is an excellent invention to keep the feet warm and dry. These shoes should be worn by rheumatic people through the whole cold season. Flannel or wash-leather shirts and drawers should be worn constantly in the cold weather. Heat seems to be almost a sovereign remedy for the chronic rheumatism. The disease generally vanishes as the sun begins to grow hot. Cold and moisture are the invariable cause of this disease in all its grades. Sleeping in damp beds, living within damp walls, sitting in wet clothes, or working in cold, damp places, and exposure to the changes of the weather when the body is heated, seem to have the principal agency in producing the disease, whether inflammatory or chronic; and these causes are to be shunned as much as possible. The laborious and active are more subject to rheumatic diseases than the sedentary. The occasion of this probably is, that the disease attacks the very instruments of motion, the cords or tendons and muscles, which are prepared for disease by the amount of action which they sustain. Strains, bruises, and injuries of the cords are constantly happening to the laborious and active, and lay the foundation for future disease. Excessive labor must always be repaid by disease and weakness of the instruments of motion.

The food, in chronic rheumatism, should be of the vegetable kind, and no more exertion or labor should be allowed than is necessary for the health of the sore parts. If there is no exercise at all, there will be some danger of effusion of mucus and lymph, and the adhesion of the different parts, and consequently, a stiffness of the joints and muscles. Effusion of any kind appears to cause the cords and heads of the bones to grow together.

The back, and the hip joints are often the seats of chronic rheumatism. Deformity is often the consequence of it. In the chronic rheumatism there is often a great degree of numbness in the parts affected. The extremities, and even the trunk of the body, will often be much colder than in a state of health.

Large warming plasters and poultices are wanted in this grade of the disease. The back should be nearly covered by a plaster of pitch, when the disease is situated there. A plaster composed of mutton tallow and resin, made stiff with Armenian bole and dragon's blood, is an excellent salve for diseased joints. It is nothing more nor less than shoemaker's wax made stiff with the articles we have named. About two ounces of the Armenian bole should be added to a pound of the shoemaker's wax. The dragon's blood is not essential. The tincture of red pepper and myrrh, called the hot-drops, is a good application for the sore cords and joints. But the best external application which we have ever used, is the common volatile liniment, to which laudanum is added, in the proportion of two tea-spoonfuls of the laudanum to two ounces of the liniment. This mixture, rubbed freely upon the painful cords, every twice or three times a day, seldom fails to give relief.

The internal remedies suitable in this grade of rheumatism are purgatives and diuretics. The aloetic pills, taken every night, to the number of four or five, for a week or fortnight in succession, have, in our hands, produced the greatest benefit. Lee's pills are, perhaps, better in some instances. The sal nitre, in eight grain doses, every three hours, is the most powerful agent which we possess in freeing the kidneys. We first learned the efficacy of this medicine under the tuition of Dr. Levi Wheaton, one of the most eminent and learned physicians who has ever practised the art of medicine in Rhode Island. He, at that time, was in the habit of using it in combination with camphor; but we have commonly used it alone. The tincture of guaiacum, either alone or in combination with the water of ammonia, has long been famous in the cure of chronic rheumatism. The dose is a tea-spoonful, three times a day. The meadow saffron, or colchicum autumnale, or the veratrine, is a powerful remedy, and exerts no small influence in reducing the swelling of the joints.

Opium is more appropriate in this grade of the disease than in the acute kind. But the Dover's powder should, in general, be selected as much the best form of using it. This powder is a very happy combination, and peculiarly suited to the condition of the system in the chronic rheumatism. Sulphur is a medicine which has often been successful in removing the complaint. The quinine, if used with discretion, in cold, feeble, and relaxed constitutions, will sometimes cure, when all other means have failed.

Where the disease proves inveterate, the chalybeate spring waters should be tried. Warm bathing, especially in the sulphur bath, and steaming the joints, will sometimes be found extremely efficacious. Hot rum and vinegar will be found an efficacious wash in the chronic form of rheumatism. When the disease tends to dropical swellings, the treatment recommended in the dropsy will be proper in this disease.

RHODODENDRON, YELLOW FLOWERED — *Rhododendron Chrysanthum*. — This is a shrub found in the northern parts

of Siberia. The dried leaves have a rough, bitterish, astringent taste, but no smell. They are a stimulating narcotic, produce heat, and excite sweat and thirst. The Siberians make use of it for the cure of rheumatism and gout. They boil about two drachms of it in ten ounces of water, and take it in the morning. They use no drink during the operation of the medicine. A cure is effected by two or three doses. The medicine is kept steeping all night.

RHUBARB—*Rheum Palmatum*.—The rhubarb root comes from Turkey, Russia and China. The Turkey rhubarb is accounted the best. It is yellow on the outside, and streaked with tints of a reddish color within. It comes in roundish pieces, perforated in the centre.

The Chinese rhubarb is brought in longer pieces, which are harder and more solid than that imported from Turkey. The Chinese has less of an aromatic flavor, but more astringency. Good rhubarb has a clear, yellow color, a solid, compact texture, brittleness, and a bitterish, astringent taste. It readily colors the saliva, and is easily pulverized.

One half of the weight of rhubarb is abstracted by boiling. It is a mild cathartic and astringent. In the diseases of women, children, and all persons of a delicate make, it is an excellent purgative. Its operation is never very drastic, although it often produces griping, owing probably to its astringency. In a looseness of the bowels, and a laxity of the muscular fibres, it is one of the most appropriate and effectual remedies. But, in the acute stage of dysentery, and an inflammation of the bowels, it is not altogether a safe medicine to use. In small doses, chewed in the mouth, it acts both as a tonic and a laxative. It strengthens the tone of the stomach, braces the muscles, and restrains the effusion of blood in diseased menstruation. In combination with magnesia, jalap, cream of tartar, or calomel, its purgative effect is increased and rendered more effectual. The best form of using it, by adults, is that of a powder. The dose is from a scruple to a drachm. A tea-spoonful is a common dose. A child from one to three years old may take eight grains at a time, in molasses, jelly, or syrup. It may, however, be used in the form of an infusion, syrup, or tincture.

In cases of indigestion or costiveness, taken daily to the amount of five or ten grains, it is scarcely excelled by any other laxative medicine. To some people it is much more friendly than others; but where it agrees with the digestive organs, it often produces the happiest effects.

RICKETS—*Rachitis*.—This malady seldom makes its appearance before the child is a year old, and as seldom begins after the age of two years. It is emphatically a disease of children, although sad and deplorable marks of it are often carried through life.

The rickets is a disease insidious and without pain. In the commencement of the disorder, no fever is discernible, but it is not usually a long time before the pulse becomes quick, and more or less fever is manifested. The child will take its usual amount of

food, although it will begin to grow thinner. The first thing which is usually discernible, in the commencement of this disease, is an enlargement of the joints, and of the head, particularly the forehead. In some instances, the breast-bone will be found to project and to become quite sharp, and the whole shape of the chest to become peaked. In this case the child is called chicken-breasted. In other instances, the joints of the back will become enlarged, and the back-bone crooked. The child bends under its own weight, and the back-bone is not able to support the weight above. The openings between the bones of the head, or the fontanelles and sutures, as they are called, are much wider than are common in well children of the same age; and the bulk of the head appears large in proportion to the size of the neck, which is more slender than common. In the worst cases of the disease, the bones everywhere become crooked, and there is a wonderful softness of the flesh. The process of teething goes on very slow, and when they are formed, they turn yellow, decay and drop out. The bowels are commonly loose, and the belly more or less swelled. Rickety children will often learn to speak sooner, and their mental faculties will be earlier developed, than well ones; but instances occur where the mind is not developed, and idiocy follows. There are very many instances where the integrity of the nervous system will remain, when the body in general will be very much disordered. The brain, the centre and origin of the nervous system, is very much insulated from the other vital organs of the body, and is not involved in that variety of textures which encompass the other parts. To a certain extent it stands alone; and the nature of its office and its substance makes it still less like other parts of the system.

The rickets will continue to progress for several years, but commonly stops after a certain term of time, and leaves the bones sound but distorted. It is not a dangerous disease, although productive of an ill-shaped and distorted form. The disease, however, sometimes terminates in death, after successively affecting every function of the body.

In some instances the softening of the bone ends in ulceration and an open sore. We once saw a case where a section of the back-bone of a child appeared to be completely melted down into a mass of soft, spongy flesh and pus.

It has been ascertained, by experiment, that the bones of rickety children, or rather a rickety bone, does not contain so much earthy matter by one half as the bones of healthy children. It is the hard, solid, earthy matter, mixed with the cartilaginous matter, which produces the solidity, hardness, and stiffness of the bones, and when an insufficient quantity of the hard, earthy matter is secreted, a softness and flexibility of the bone necessarily ensue. If there is too great a quantity of the earthy matter deposited, in proportion to the cartilaginous or gelatinous, the bone becomes very brittle, and is liable to be broken on the slightest occasions. We saw one instance of this nature, in the case of a young lady who had broken

almost every bone in her limbs, and some of them several times, by the slightest accidents, such as stepping too hastily from one stair to another, or walking upon a side-hill.

To what this fault, in the elaboration and deposition of earthy matter, is owing, has never been ascertained. Some have supposed it to be owing to a derangement of the digestive organs, but this is not confirmed by observation and experience.

The external causes of the disease, so far as they have been ascertained, appear to be the want of cleanliness; the want of a sufficient quantity of milky or nourishing food; the want of good air and of the influence of the sun, and the want of motion or exercise. Children that are bathed every day in tepid or cold water, feed at a good breast of milk, or have a sufficient quantity of good cow's milk, take the fresh air and the sun often, and are sufficiently dandled, we believe will hardly ever have the rickets. Dandling children, after they get to be six weeks or two months old, is as essential to their health as muscular exercise is to a grown person. Breathing the open fresh air is also as vivifying to their blood as to that of adult people. Nor are the rays of the sun less congenial to their bodies than to the bodies of older children. The skins of children are much more affected by dirt and filth than the skins of adults, and should always be kept clean, both by frequent washings and clean clothes.

The rickets is commonly attributed to a scrofulous condition of the body; but as many other diseases, about the nature of which there is but little known, are attributed to the same source, no great reliance should be placed upon such a theory of the disease. It is very common with writers, when they are at a loss about the character of a disease, to attribute it to a scrofulous state of the system, as if this were the best disposition that could be made of it. We think the repetition of such generalities is often a stumbling-block in the way of all further inquiry.

Domestic Remedies. — The necessity of cleanliness, of air, and light, of a due quantity of milk or nutritious food, and of motion or exercise, has been alluded to. It is not every case of enlarged joints and apparent increase of the size of the head that can be called the rickets. Not one case in ten of those children to whom our attention has been called, on a suspicion of their having the rickets, has in reality turned out to be such. There are many inequalities in the size of the heads of bones, and errors in their shape, which children will entirely outgrow, and which cannot be called rickety. We have seen great prominences in the breast-bone of children, which in a few years have entirely disappeared; and so in the wrists and ankles.

A child that is ascertained to be rickety should frequently be carried into the open air in dry weather, and often bathed in cold water. The limbs, back, and rickety parts should be gently rubbed every day, for half an hour at a time, with the hand. There is nothing so good as rubbing, to harden the flesh and bones, and to give them their proper cohesiveness. Alcohol, brandy and rum,

are all good embrocations for rickety constitutions. Opodeldoc, frequently rubbed into the diseased parts, is an excellent application. The aliment should be plentiful, and suited to the age of the child. If the mother's or the nurse's milk has been the cause of the disease, the child will grow better when it comes to live upon the milk of cows. We believe that children who are brought up upon the milk of cows, after they are weaned, are much less likely to have the rickets than those who live upon other kinds of food. The food of children should always be soft, if it is not liquid.

The most proper food for children affected with this disease, next to milk, would be a soup made by digesting the bones of animals, especially beef bones, by the action of heat and water, until they become a jelly. Such a mass would contain the precise elements for making new bones, or supplying the deficient properties of diseased ones. Being reduced to the condition of aliment, and taken as food, the earthy part of bones would be supplied in much greater quantity than could be introduced into the system in any other way. By first powdering the bones by grinding or pounding them in a mortar, and boiling the mess in a closely-covered vessel, the requisite degree of decomposition could always be obtained. Pepin's digester, where it could be obtained, would be the proper utensil to reduce bones to that degree of softness which would be required for food. All the heating articles which are commonly used in soups might in a great measure be dispensed with.

A plaster of pitch, reaching the whole length of the child's back, should be worn where that bone is affected. The rickety parts should be washed with a decoction of oak bark in which alum is dissolved. Where it is possible to obtain it, spring water which contains iron should be drank. The bowels of the child should be brought to the condition of health by the use of astringents or cathartics, whichever may be indicated by the frequency or the slowness of their motion. After a fever has commenced, the sweet spirits of nitre and the antimonial powder will be proper, in doses suited to the age of the child. The chalybeate called Griffith's mixture will be found one of the best of tonics. The rust of iron, in powder, in doses of four or five grains to a child between one and two years of age, may be given where chalybeate spring water cannot be obtained. If these things fail, the quinine, in the dose of one grain, should be tried.

Professional Remedies.—In the cure of the rickets, the iodine holds the highest reputation of any medicine now in use. This medicine was entirely unknown to Cullen, Buchan and the old writers, and bids fair to become a valuable remedy in the cure of many diseases. This medicine should receive a fair trial. Lime-water appears to be a suitable remedy, from its containing in solution the very element which is deficient in the softened bones. The muriate of lime has been esteemed a valuable medicine in the cure of the disorder, and is well entitled to the attention of the physician. A little wine or brandy, given two or three times a day, will often be found serviceable. The use of bandages and

supporters to the diseased limbs is of little or no service; sometimes they are even injurious, by impeding the circulation of the blood. The child should sleep upon a hair mattress, and always be kept comfortably warm. It should be carried to the sea-side in the summer time, and bathed in the salt water. The sea air is peculiarly strengthening to the system in this disease; it vivifies the blood, increases the appetite and the power of digestion, and braces the muscles and cords.

RING-WORM—*Herpes Serpigo*.—This disease consists of red rings, formed by a set of small pimples or blotches, which contain a watery, corrosive fluid. From the size of a ninepence, these red rings will sometimes spread to the size of a dollar. They are the most frequently seen upon the lower part of the face; but often infest the scalp, breast, and other parts of the body. They present an unsightly, fiery, rough-looking eruption, resembling a red worm coiled in a ring, whence the name. It is attended with itching, and when scratched, with a discharge of a fluid, which, by touching other places, spreads the eruption to a greater distance. In some cases it proves a severe disease, and taints the whole system, corroding the skin, and producing an intolerable itching.

It is thought to be contagious; often conveyed by using the same comb, napkin or razor. It has been named, in New England, the barber's itch.

Remedies.—One of the best applications is a solution of white vitriol in cold water, in the proportion of five grains of the vitriol to two ounces of water. The skin should be kept clean, and the wash often used in the course of the day. If the head is attacked, the hair must be shaved off. Turner's cerate is a good application. In bad cases, the citrine ointment, made of nitric acid, quicksilver, lard, and sweet oil, should be applied to the eruption. Small doses of salts, cream of tartar, or Rochelle powders, will be all the medicine necessary to take internally.

The lead-water, or a solution of muriate of ammonia, or lunar caustic, may be used as a wash, if the white vitriol and cerate fail.

RISUS SARDONICUS.—A deathly-looking smile or laugh, produced by convulsion, spasm, or delirium. In most cases, it is considered a forerunner of death.

ROCHELLE POWDERS.—These powders are of modern discovery or invention. They unite the effervescence and grateful flavor of the soda-powders with the cathartic effect of the Rochelle salt, or tartrate of potash and soda. They are composed of the powdered Rochelle salt and super carbonate of soda, which are usually contained in one paper, and of the tartaric acid, which is contained in another, in the proportion of one drachm of the Rochelle salt, thirty grains of the super carbonate of soda, and twenty grains of the tartaric acid. The Rochelle powders are an invaluable cathartic, refrigerant, and antiseptic. In all kinds of fever, they are appropriate and useful. They abate the heat, refresh the stomach, promote sleep, move the bowels, free the kidneys, and

relieve the head. Where there is sickness at the stomach, a draught made of the Rochelle powders will often allay it; for this reason they are often given in the cholera morbus, and hemorrhage from the stomach. In cases of bleeding at the lungs, nose, or of any other hemorrhage, they are equally serviceable. In dyspepsia, costiveness, green sickness, pleurisy, peripneumony, and in nervous complaints, these powders will be found signally useful.

The common dose for an adult is one of each of the powders, dissolved in a gill or half a gill of water, in separate tumblers, and poured together. They are often given in divided doses, as the stomach will bear the medicine. A corresponding quantity of each of the powders can be dissolved in a little water at a time; or the whole may be dissolved, and a table-spoonful of the solution taken as the case may require. Where it can be done, it is preferable to take them in a state of effervescence.

ROOT OF GENTIAN—*Radix Gentianæ*—*Gentiana Lutea*.—The gentian is an European plant. The root is exceedingly bitter. It is long, thick, and wrinkled. Its surface is brown; but its inner texture yellow and spongy. Its extractive matter is soluble in water and in alcohol. It is devoid of astringency, and in this much of its excellency, as a bitter and a tonic, consists. It strengthens the stomach and improves the tone of the whole system. In a large dose, it purges. The dose of gentian root in powder is from ten to forty grains. It is chiefly used in the form of tea or tincture. In diseases of general weakness, in the last stage of fevers, in gout, and in failures of the appetite and strength, there is no better tonic. It enters into the composition of many kinds of bitters, one of the most celebrated of which is the *Stomachic Elixir*, or *Compound Tincture of Gentian*. This elixir or tincture is made in the following way: Take of gentian root, sliced and bruised, two ounces; orange-peel, dried and bruised, one ounce; white canella bark, bruised, half an ounce; powder of cochineal, half a drachm; new rum, two pints and a half. Let the whole stand for seven days, and strain the liquor. It forms one of the best bitters in use. In dyspepsia and diseases of debility it has been found extremely serviceable. The dose is two or three tea-spoonfuls, twice or three times a day.

ROSEMARY—*Rosemarinus Officinalis*.—This plant grows wild in the south of Europe. The principal use which is made of it is in the composition of red lavender and Hungary water. For these purposes, the flowering tops are distilled, and an essential oil obtained. The rosemary plant and oil have a fragrant odor, and a warm, bitterish taste. Medicines composed of it are highly esteemed in the relief of nervous affections, such as hysterics, hypochondrism, palsy, hemicrania, sick headache, and vertiges.

RUBEFACIENT.—Medicinal substances used to produce a redness of the skin or part, without raising a blister, such as diluted ammonia, flies in small quantity, mustard, ginger, and garlicks,

applied just long enough to excite pain and inflammation, but not to produce a discharge of fluid.

RUBEOLA—The Measles.—See *Measles*.

RUE—*Ruta Graveolens*.—This herb grows in gardens, and remains green through the winter. It has a strong, disagreeable smell, and an acrid, burning taste. If much handled, it will blister the skin. It has a powerful effect in promoting sweat, and may be used in chronic rheumatism and catarrh, hysterics and epilepsy. It quickens the circulation of the blood, and excites the mucous glands. Like other fetid medicines, it has somewhat of an anti-spasmodic and detergent nature. A plant of so much activity needs a thorough investigation. The dose of the leaves is from fifteen grains to two scruples.

RUPTURE—Hernia.—In a rupture, the walls of the belly are bursted, and let out a portion of the bowels, or of the caul, or both together. In some rare cases, the stomach, liver, or bladder, is pushed out into a sac. Ruptures most commonly occur at the bottom of the belly, or at the navel. They appear in the groin, in the scrotum, in the labia pudendi, and on the inside of the thigh. Some ruptures are very large, and others small. The small ruptures are, in general, the most dangerous. So liable are mankind to this accident, that it is supposed that there is one person in every ten who has a rupture of one kind or another.

In some cases they exist from birth, and are called congenital; but in most instances they are produced by strains, blows, or violence, in one way or another.

The ordinary symptoms of a rupture are, a tumor or swelling somewhere about the belly, an increase of its size after a meal, a decrease of its size or disappearance when the patient lies down, its reëpppearance on rising up and standing upon the feet, a gurgling sound when the contents of the rupture return into the belly, a diminution of the tumor when pressed by the hand, and a sudden enlargement when the pressure is removed. To these phenomena, may be added a disposition to vomiting, colic, or stoppage of the bowels, constipation, and flatulence.

The danger to be apprehended in ruptures is strangulation of the bowels, or part included in the tumor. This is known by a stoppage of the bowels, vomiting, pain in the bursted place when handled, a tense feeling in the tumor, and all the symptoms of the colic.

A rupture at the navel is called an umbilical hernia; one in the inside of the thigh, a femoral hernia; one in the groin, an inguinal hernia; and one in the scrotum, a scrotal hernia.

In case of a strangulation, the patient should lie upon the back, and endeavor to reduce the rupture by a constant but gentle pressure with the hand and fingers. If this does not succeed, he should take a full dose of castor-oil, salts, or magnesia. If the symptoms of colic become violent, blood must be drawn from the arm, or by leeches to the part, and more powerful cathartics taken, such as the spirits of turpentine in the dose of an ounce or two table-spoon-

fuls at a time, or the Croton oil in drop doses, or calomel and other active purgatives. The main object in these cases is to relax the system and to prevent inflammation. Frequent injections of ipecac., antimony, or tobacco, will often greatly assist in the reduction of the hernia, but in spite of all internal means, an operation is sometimes indispensable; the tumor must be laid open, and the bowel, or other part, put back into its place. The operation is somewhat dangerous, but is often completely successful.

People afflicted with hernia, or a rupture, are apt to be troubled with colic, constipation, and vomiting, in consequence of the unnatural situation of the bowels.

In ordinary cases, after the bowel is returned, it must be kept in its place by a well-adjusted truss, which should only be removed when lying in bed.

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SACRUM.—This bone forms the back part of the pelvis; it joins the hip bones on each side, the last lumbar vertebræ above and the os coccygis below. In children it consists of five or six separate bones, which, in the adult, grow together, and make one bone. It is concave in the inside, and convex on the outside.

SAFFRON—*Crocus Sativus*.—The best saffron grows in England. The tops are the medicinal part. It is of a deep-orange color, and of a pleasant, aromatic, bitter taste. The saffron is a stimulant and narcotic. It exhilarates the spirits and strengthens the stomach. In hysterical and spasmodic affections it has been used with advantage. But almost the only use which is made of it at present is in the measles and some other eruptive complaints. We should think it might be useful in hypochondrism and other nervous complaints. It is used in the form of a tea, taken as the occasion may require.

SAGE.—Sage is a good medicine for the head and stomach. It is soothing, stimulating, and strengthening. A tea made of the leaves, and drank in cupfuls, warms the body, excites an appetite, and quiets the nerves. It is a mild aromatic, a bitter, and an astringent. In fevers of debility, it makes an excellent drink, especially if lemon-juice is mixed with it. It also makes a good gargle for canker and ulceration in the mouth and throat.

SAL AMMONIAC—*Muriate of Ammonia*.—This salt is found native, but is now, for the most part, manufactured. It may be formed directly by the union of the spirit of sea-salt or muriatic acid with ammonia or smelling-drops. It is solid, partially transparent, and ductile, and readily dissolves in water. It promotes sweat, and increases the urine. Dissolved in vinegar and water, it is a good medicine to lessen the heat of fever. In the dose of a

drachm, dissolved in water, it raises a sweat, and increases the secretion by the kidneys.

A solution of sal ammoniac is one of the best lotions for inflammations, skin diseases, sprains, and bruises. It is an excellent gargle for the sore throat, and a good wash for blotched face and other eruptions of the skin. It reduces inflammation, and dissolves indolent scirrhus tumors. Applied to the head, it relieves pain and abates delirium. It appears to operate by producing cold in the first instance, followed by stimulation.

SALEP—*Orchis Masculæ*.—The root of this plant makes an agreeable and nutritious mucilage or jelly. In its nature it resembles sago, and may be used for the same purposes, and in the same way. It is demulcent and easy of digestion, very suitable in bowel complaints and dyspepsia. Boiled with milk, it makes a healthy article of food.

SALERATUS—*Sal Æratus*—Bicarbonate of Potassa.—This salt is nearly the same thing as pearlash. It may be made by passing a stream of carbonic acid through a solution of pearlash. After the solution is saturated with the acid, it is strained, and evaporated by a gentle heat. Crystals form as the solution evaporates, which are dried on paper. The salt is soluble in water, and milder than pearlash. The dose is from a scruple to a drachm, dissolved in water. There are several ways of preparing it, but the above is the most convenient.

SALIVA—Spittle.—There are three pairs of glands destined to secrete the saliva. They pour the saliva into the mouth by means of six ducts. The amount of saliva which they are supposed to secrete in twelve hours is twelve pounds. This fluid is solvent and antiseptic. It penetrates and softens the food, and fits it to be digested in the stomach. It requires a greater degree of cold to freeze saliva than water. The body is undoubtedly emaciated whenever any great amount of the saliva is wasted by spitting.

SALIVATION.—An increased secretion of the saliva in the mouth. Many substances have this effect, but mercury is the one in most frequent use. Mercury produces not only a profuse salivation, but a permanent one.

SALTPETRE—Nitrate of Potash—*Sal Nitre*.—This salt, when analyzed, is found to consist of aqua fortis and potash. It is found ready formed on the surface of the soil in many places. In the south of Europe the formation of the salt is favored by artificial means. The carbonate of lime is mixed with animal and vegetable substances in a state of decomposition, exposed to the air, but sheltered. In this way the salt is developed, after a chemical process for separating and cleansing it. It can be made by merely mixing aqua fortis and potash, and crystallizing it.

Saltpetre or nitre has a sharp, bitterish, pungent taste, followed by a sensation of cold. It explodes when thrown into the fire, by which it may be distinguished from other salts. It is one of the best, if not the very best, diuretic which we possess. It lessens the

heat of the body, abates thirst, and promotes insensible perspiration.

The sal nitre is used in a great variety of diseases, particularly in fevers and stoppages of the water. Its power of lessening the heat and promoting the secretion by the kidneys, makes it an appropriate medicine in all cases where there is violent inflammation. In the scarlet fever it has been in our hands of inestimable value. It is often used in diseases of the skin, in the form of a lotion, particularly in the salt-rheum.

The ordinary dose for an adult is six grains of the powder, although it may be given in a smaller or larger quantity, as the disease and particular symptoms may require. Dose for a child from one to three years old, two grains. It may be taken in powder, or dissolved in water.

People should have a care that it is not mistaken for other salts, as, in large quantity, it is a fatal poison. In malignant diseases, where the pulse is low, it is an improper medicine.

SALT-RHEUM—Psoriasis.—The salt-rheum is one of the most common skin affections in New England. It usually makes its appearance in the beginning of cold weather, and often continues through the winter. It often comes and goes many times in the course of a person's life, after being once subjected to it. It consists of red, rough patches, which appear in every part of the skin, but more especially about the forehead, neck, shoulders, on the inside of the arm below the elbow, on the back of the hand, and between the fingers. The skin of the affected spots is thickened, hard, and red, is apt to crack or be chapped, and becomes very sore. This humor is more or less covered with a thin, branny, dry scale. If the eruption is picked or eroded, there oozes a thin, transparent fluid, which soon dries into a thin scab.

There are several different kinds of the salt-rheum, but they all show a rough, scaly state of the skin, and are for the most part attended with a thickening of the cuticle, an angry, inflamed appearance under the scale, with cracks or chaps. One kind of the salt-rheum runs from one part of the skin to another, and looks something like an earth-worm. It makes a kind of furrow in the skin, and in its serpentine course, will travel nearly over the whole surface. Another kind is seated on the lips, particularly the lower lip. The lips are thickened, hard, red, and cracked. The cracks in the lips from this kind of salt-rheum are exceedingly troublesome. In young people, it will sometimes last two or three years, unless cured in the early stage. The salt-rheum differs from the tetter in the small quantity of matter which it discharges, and in the thickening of the skin, and in its never betraying a raw, suppurating surface. If any matter is discharged from the salt-rheum eruption, it immediately dries into a scale, whereas the tetter often remains in a running state for a long time.

The salt-rheum eruption is attended with a sensation of heat, smarting and itching, like the tetter, but has more the character of

a dry sore, and less of an ulcer, than the tetter. This disease probably derived its name from the circumstance of the watery matter of the eruption drying into a thin scale like a solution of salt; and hence the conclusion that the disease was owing to a salt humor in the blood or the system.

There is one kind of this humor which spreads into large patches. This kind appears on the temples, cheeks, chin, neck, and about the ears; it affects the arms below the elbow; and sometimes nearly encircles the fingers. Even the nails sometimes crack and peel off. The spot first affected with it commonly gets well before the humor proceeds to a new place. The duration of the salt-rheum is from one to four months, but sometimes it will become permanent.

Domestic Remedies.—In the first stage of the eruption, the best thing to apply to it is a weak solution of white vitriol, or Thomson's eye-water. Two grains of the white vitriol to an ounce of rain-water, makes a wash quite strong enough. A solution of the sugar of lead, of the same strength, will in some cases suit the eruption better than the white vitriol. This humor has in many instances been cured by giving the buckthorn syrup, three days in succession, and then omitting its use for as many days, until the disease disappears. The calamine ointment,—Turner's cerate,—must be constantly applied to the eruption at the same time. The sarsaparilla tea is said to have effected many cures, in conjunction with some cooling ointment. It is of the utmost importance in this disease to soak the skin well with warm water, and to soften it as much as possible by soft, bland poultices. The diet should be light, nourishing, and fresh, and the drink cold water. Heat and soap aggravate the eruption exceedingly.

SARCOMA.—A fleshy tumor, such as a wen. In some rare instances they are absorbed; but in general they must be cut out, to affect a cure. Some are rapid in growth, and others exceedingly slow. They have neither soreness, heat, nor pain, unless inflamed or irritated.

SARSAPARILLA.—This root grows in Ohio and other parts of the Union, and in the Spanish West Indies. It came into use as a specific for the venereal disease. It consists of bunches of small roots, as long and about the size of whip-cords; the bark is of a blackish color, and the woody part of a white color.

The virtues of the root are said to reside in its bark. It has a bitterish, glutinous taste, and readily yields its virtues to cold or hot water. Infused in cold water, and allowed to stand for a day or two, it affords a mucilaginous drink, which is valuable in diseases of the urinary passages, and in the confirmed stage of syphilis. It is thought by many to alter and improve the blood, and is given in many diseases to change the state of the fluids. It is probable that it possesses a property of this nature, when used freely, and for a length of time. An ounce or two of the root may be infused in half a pint of hot water, and drank in four separate draughts in the course of the day.

SASSAFRAS—*Laurus Sassafras*.—The bark of the sassafras-tree has a pleasant, spicy taste, and a fragrant smell. A volatile oil is obtained from it, in which all the virtue of the tree resides. The oil is a carminative and perspirative. To render it suitable to take, it is dissolved in spirit of wine, or converted into an essence, and mixed with water or syrup. It is a good stomachic and stimulant. It quickens the blood and opens the pores. In nervous and chronic rheumatic complaints, it is a serviceable medicine. The dose of the oil is from two to ten drops, dissolved in alcohol.

SAUNDERS, RED.—This is a wood of a dull red color, brought from the East Indies. It is ground and used in medicine chiefly as a coloring matter. It communicates a deep red color to alcohol and proof spirits. It gives the color to red lavender.

SAVIN—*Juniperus Sabina*.—There is no one domestic medicine of more value than the savin. It has the singular property, when rightly administered, of hastening and restoring the menstrual secretion. Although a stimulant in general, the savin, more than most other medicines, appears to operate upon the womb. It is a common shrub, produces a blue berry, and evolves a terebinthinate smell. The leaves are the part used in medicine. They are dried, powdered, and given in the dose of twelve or fifteen grains, three times a day, in molasses or syrup. From the leaves is distilled an essential oil, which has the same properties with the leaves themselves. They have a bitter, acrid taste, and a disagreeable smell.

The savin increases all the secretions and the heat of the body. Upon the urine it has the same effect as upon the menstrual discharge. The fine powder, mixed with simple cerate, makes a valuable ointment with which to dress issues and blisters, where we wish to produce a discharge. The value of the savin has never been properly appreciated. In chronic rheumatism it has been used with success, and in several other diseases where there was a want of a brisk circulation of the blood and a proper degree of warmth.

SCALD-HEAD—*Tinea Capitis*.—The scald-head is a humor in the scalp, which consists of large, yellow-colored pimples, or rather pustules. These pimples continue to increase in size for a few days, when they break and discharge a watery, sticky, acrid, eating, hot matter, which mats the hair together, and extends the humor to other parts, and in many instances all over the scalp. As fast as one crop of the sores heal, another is produced by a diffusion of the hot, acrid matter, until the surface of the head becomes a complete scab. The eruption is attended with a considerable degree of itching, and the matter of the humor settles into dry scales or yellow scabs. The humor uproots the hair, and for a considerable time the child is left quite bald; but the hair grows again, and, we believe, the disease rarely leaves the scalp permanently bald.

The pimples which appear in the eruption are circular in form, and not pointed, but rather flattish, with an irregular edge. The disease will last from three or four months to as many years. Grown people are seldom or never the subjects of it.

Domestic Remedies.—The head, in this disease, should be carefully soaked every day with warm rain or spring water, and the whole surface of the skin should often be bathed, and kept clean. When the eruption first makes its appearance, a weak solution of the sugar of lead will often arrest its progress, and especially allay the itching. When the irritation and itching become extreme, a dose of laudanum or paregoric must be given. If the eruption runs badly, as is almost always the case, a little of the lump magnesia, finely powdered, may be strewed on, or a little hair powder. The ointment called Turner's cerate, spread upon a piece of linen and laid upon the humor, is one of the most cooling and the most healing applications which can be made to the scald-head. Many people wash the head with soap and water, but this will not answer in every case. Cooling applications should be tried first, and afterwards those which are stimulating. The inner bark of the elder, mixed with cream, is an excellent ointment for small children. An ointment made of the narrow dock is also no mean remedy. After the violence of the humor has somewhat spent itself, the citrine ointment will be found the most healing of any of the stimulating applications. The tar ointment, made of equal parts of tar and mutton suet, and spread upon the scalp, has often cured the disease.

The diet in this disease should be light, but nourishing; and the scalp can never be bathed too much. If people would take pains enough, we believe the disease might be cured by bathing alone. The child should take quinine or the Griffith's mixture. A dose of the cream of tartar should be given every other day, which may vary, according to the age of the child, from a tea-spoonful to a table-spoonful, mixed with syrup or molasses.

Professional Remedies.—It will often be necessary in this eruption to give Ethiop's mineral, or some other form of mercury. To a child between one and four years of age, two grains of the mineral can be given, every day; and to those who are older, four grains. It will often be advisable to give small doses of calomel. Powdered charcoal has been known to cure the eruption when applied locally to it. The iodine should be tried. A course of mineral waters and medicated baths should be tried in obstinate cases.

SCALDS AND BURNS.—See *Burns*.

SCAMMONY—*Convolvulus Scammonia*.—This medicine comes from Aleppo, in light, spongy, friable masses, of a shining, blackish ash color. Indeed, the powder looks very much like ashes. It consists, in nearly equal proportions, of resin and gum. Scammony is a thorough, strong, drastic purgative. It is used in cases of constipation and torpidity of the bowels, as in palsy and chlorosis. It is commonly mixed with milder cathartics. The

dose is from three to twelve grains, triturated with sugar, almonds. or gum arabic.

SCAPULA—The Shoulder-blade.

SCARLET FEVER—Scarlatina Anginosa, Rosalia.—This disease has taken its name from the peculiarly florid color of the skin which usually attends it. As this, however, is not a constant symptom, it cannot be considered as characteristic of the disease, nor can we form any opinion of the severity of the attack, or prognosticate what may be the termination, by the quantity of the eruption, or the degree of redness, except when considered in connection with other symptoms. Like other febrile diseases, scarlet fever usually commences with some degree of chilliness and shivering, debility, and lassitude, or disinclination to take exercise, pain in the head, back, and limbs; the whites of the eyes become reddish, and the expression of the eye is peculiar, indicating great suffering. There is sickness at the stomach and vomiting, which are generally severe in proportion to the violence of the attack. The surface of the body is often intensely hot and dry, though the extremities are sometimes cold in the early stage, in consequence of the unequal circulation of the blood. When the eruption is present, which happens in the great proportion of cases, it makes its appearance in the course of the second day, in innumerable fine scarlet dots, which are at first distinct, the intermediate spaces appearing, from contrast, preternaturally white; but as the disease advances, the dots become more numerous, spread, and run together, giving the skin a continuous scarlet color, resembling the shell of a boiled lobster. There forms, on the top of each of these dots, small vesicles filled with a pellucid fluid, which at the crisis dries away, leaving a scurfy or scaly appearance of the skin, which lasts a number of days, until in some instances the whole scarf skin is cast off. These vesicles have the appearance of small pimples or goose-flesh, but are not always apparent to the naked eye, and can seldom be seen without a close examination. There is frequently a peculiar swelling or puffiness of the flesh, particularly of the hands, spreading and distending the fingers in a manner unlike any other disease. The tongue, in the first stage of the disease, is more or less coated with a grayish or brownish fur, especially in the middle, through which may be seen many small, reddish, nipple-shaped eminences or papillæ, the edges being of a deep flush color; but as the disease advances, it often becomes suddenly clean, leaving the surface of a fiery and frequently glossy red. About the time of the crisis, it is not uncommon for the tongue and whole lining surface of the mouth to be raw and exquisitely tender, rendering it extremely painful to take into the mouth any but the mildest liquids. The pulse is invariably very rapid, frequently numbering one hundred and forty or fifty in a minute in children, and in adults one hundred and twenty or thirty. The artery feels small, and the beat is rather soft and often obscure, though sometimes hard and wiry. The symptom which is the most constant in this affection, — the one

without which, in fact, the disease never exists, — is a peculiar inflammation of the throat, which almost immediately runs into a state of ulceration. Upon pressing down the tongue with the handle of a spoon, and looking into the mouth, the palate and throat, as far as it can be seen, appear swollen and of a deep florid color, and upon one or both tonsils may be seen whitish or grayish ulcers. These ulcers are sometimes small, and are usually confined to the tonsils, though they occasionally extend to the uvula and other contiguous parts. The inflammation and consequent swelling and ulceration of the throat are the cause of one of the most troublesome symptoms attendant upon the disease, a great and painful difficulty in swallowing. The difficulty, indeed, is so great, in some instances, as to render it impossible to get anything into the stomach; liquids being frequently rejected through the nostrils. In some cases, however, swallowing is performed without pain or difficulty.

A circumstance that renders this condition of the throat peculiarly distressing, is, that the secretions of the parts are very much increased and acrid, creating almost an incessant inclination to swallow, in order to clear the mouth and throat of the acrid mucus with which they are constantly being filled.

This preternatural accumulation of mucus in the throat and back part of the nostrils, to which the inflammation extends, also gives rise to another symptom that is often observed, especially in children, which is a disagreeable rattling noise in breathing. This is caused by the passage of the air through the accumulated phlegm, which is constantly being forced forward and discharged from the nose. This symptom continues a number of days, and frequently gives the friends much unnecessary alarm.

The passage from the throat to the ear, called the eustachian tube, participates in the disease, the inflammation extending up to the ear and causing pain and swelling in that region. The glands under the jaw and ear inflame and produce one or more swellings externally, which sometimes increase to a large size. Cases are occasionally met with in which these swellings grow very rapidly in the early stage of the complaint, extend round the fore part of the throat, and, pressing upon the windpipe, produce suffocation and death. It more frequently happens, however, that they progress slowly, and, many days or even weeks after the fever has subsided, either gradually disappear, or go on to suppuration, and ultimately break and discharge their contents externally.

When abscesses form and discharge through the ear, some degree of deafness, which is generally incurable, is not an unfrequent consequence.

Scarlet fever is what may be termed a self-limited disease, and probably there is no one, excepting the small pox, and two or three of the contagious eruptive diseases, that runs its course with more regularity as to the time it takes up in its different stages. The eruption appears on the second day, and continues, with but

little visible alteration, until about the seventh, when it begins to fade, and desquamation takes place, and when the violence of the disease has not been so great as to destroy the organism of the whole system, or some important part, a general amelioration of the symptoms may be expected. It is a general observation, that if no very fatal symptoms be present on the ninth day, the patient may be considered out of danger. Judging from our own observation, this remark applies almost equally well to the seventh day; for in those cases where death takes place from the violence of the fever, and not from the sequelæ of the disease, which may be fatal even after a mild run of fever, there are almost always unequivocal signs of dissolution as early as the sixth or seventh day.

In those cases which prove fatal, death may occur on the third or fourth day, though it more frequently happens from the sixth to the eighth or ninth. We would not be understood to mean that there is no variation in the length of time this disease runs, as there are many circumstances which may vary it more or less; when very mild, it may be shortened a day or two; or if unusually violent, be protracted a few days. We occasionally meet with cases in which the prognosis is very difficult, as late as the tenth or eleventh day. If we plant the seed of any particular vegetable, we may expect that vegetable to arrive at maturity in a certain number of weeks or months, but it is well known that its growth may be hastened or retarded by the nature of the soil, the character of the season, and cultivation; so with self-limited diseases,—the constitution, the weather, the peculiar character of the prevailing epidemic, and the treatment, may produce slight variations.

Scarlatina may be distinguished from measles,—the only disease which it much resembles,—by the absence of cough and other catarrhal symptoms; by the appearance of the eruption, it being more of a scarlet color and the dots smaller, and by its appearing on the second instead of the fourth day; by the ulcerations in the throat, and the prevailing epidemic.

If measles be prevalent, and the patient have been exposed to the contagion, we should expect the disease to be measles; but if there have been no such exposure, or if the patient have previously had that disease, there will be no difficulty in forming an opinion of the nature of the case.

The quinsy being seated in the throat, may be mistaken for scarlatina; but as in quinsy there are no superficial ulcerations upon the tonsils, there being only a smooth, glossy swelling, the tendency of which is to the formation of an abscess, and as it is unaccompanied by an eruption, there can be but little difficulty in distinguishing them.

Almost all authors mention a variety of scarlatina which is called simple rash, scarlatina simplex; but it is our opinion that if the throat be not affected, it cannot be considered as a variety of this disease, but is a distinct affection.

Whether scarlatina is contagious, is a question of the greatest

importance, and one which is the most difficult to decide. It is the common belief, when a number of cases occur in the same family or neighborhood, that one individual has taken it from another; but inasmuch as there is no good reason why the same cause which produced it in the first instance may not have produced it in the second, and so on, it will readily be seen that any conclusions arrived at in this manner are liable to be fallacious. Judging from our own observations, however, which have been by no means limited, and the best authorities on the subject, we are inclined to the opinion that it is, in a greater or less degree, contagious, and would recommend that all reasonable means be used to prevent it from spreading in that way. No harm can come from keeping the sick and well as much separated as circumstances will conveniently permit.

The length of time the contagious matter remains latent in the system probably varies from a few days to several weeks; but it has been satisfactorily ascertained that the ordinary period is five or six days. The uniformity with which the disease has made its appearance about the fifth day after exposure to the contagion, has been to our minds one of the strongest proofs of its contagious character. A number of cases have recently occurred, under our observation, in which there could be but little doubt that the disease originated in this manner. It should be observed here, that all persons are not equally susceptible to the contagion, and though one may take it, another, who is equally exposed, may not. It is a disease of infancy and youth, though the susceptibility to it is not entirely extinct at forty-five, as cases sometimes occur at this age. A particular friend of ours, a man well known in this community, when on a visit in the north part of Massachusetts, sickened and died of scarlet fever, in a few days, at the age of forty-one years; and we have had a violent case in our own family, in a person aged forty-two. It rarely, however, attacks persons over forty, and when it does, it is not often dangerous. The susceptibility to the disease is very much lessened, for a time at least, by having once had it, but it is not destroyed. Whatever the opinion of others may be upon this subject, we are convinced, from observation, that the same individual may have the disease twice or more, but are inclined to the opinion that the subsequent attacks are not likely to be as severe as the first.

Upon the subject of the cause or causes of the scarlet fever but little is at present known. All attempts to investigate them have proved futile. It appears in all seasons of the year, and in all kinds of weather, though it more frequently prevails in its severer types in the cold and wet seasons than in the warm and dry.

It often prevails epidemically, being undoubtedly produced by some kind of exhalations from the earth, miasms floating in the air, or other atmospheric influences, the precise nature of which eludes detection.

Remedies.—Perhaps there is no disease about the treatment of

which a greater diversity of opinion prevails than that of scarlet fever. By some physicians of eminence the antiphlogistic or reducing plan, by bleeding, cathartics, and antimonials, is vigorously adopted; by others, of equal celebrity, the extreme opposite treatment, by wine, bark, quinine, and cayenne, is considered the most successful. Some have great confidence in medicine, and accordingly prescribe it in unbounded quantities; whilst others, again, believing it to be self-limited, and but little under the control of remedial agents, and that the recuperative powers of the system are more likely to bring the disease to a favorable crisis, when allowed to operate undisturbed, give little if any active medicine, leaving it principally to nature.

All these, and the numerous other modes of treatment that have been proposed, are probably wrong when indiscriminately adopted, though they may all be occasionally right when applied to particular cases or epidemics. Much attention to the character of the prevailing epidemic is indispensable, in order to be able to manage it with the greatest prospect of success.

Should there be a general and unequivocal tendency to the inflammatory character, antiphlogistics may be cautiously used. We say cautiously, for it should be observed that this class of remedies is never borne as well in this as in many other fevers, when of the same apparent degree of violence; but should the symptoms of the case under treatment, or the general character of the epidemic, be of the typhoid or putrid kind, stimulants and tonics will undoubtedly be serviceable.

It may be remarked, in regard to the treatment of this violent and unmanageable disease, that it is much easier to say what is not right than to point out what is. We will, however, as concisely and explicitly as possible, describe what appears to us to be the most rational practice at present known; a course of practice that will always be safe, and, if we mistake not, as successful as, in the present state of our knowledge, can be expected.

When a person is attacked with the symptoms of scarlet fever, one of the first and most important things to be done is to bathe the feet and hands in hot water, which may be rendered more efficacious by the addition of mustard, cayenne, salt, or some stimulating herbs. A deep vessel should be used, and the bath continued twenty or thirty minutes, and for the first two or three days should be repeated twice or thrice a day.

After the fever is established, the cold stage having passed off, simple warm water will be preferable to a stimulating bath, and if the patient be very weak, once a day will be sufficient. Should the patient not have strength to sit in a chair, he may recline upon a bed, and let his feet hang off into a pail placed upon a stool of convenient height, or woollen cloths may be wrung out of the bath and wrapped around the feet and legs. In applying baths in this manner, great care is necessary not to have them get cold before they are changed. After the bath, if the head be affected, as is usually the case, mustard, or some other stimulating poultices,

should be applied to the feet, of sufficient strength to produce some degree of smarting. As the disease advances, however, if the heat be great, stimulating applications become uncomfortable and unnecessary, and should be omitted. During the continuance of the cold stage, warm sudorifics, or perspirative drinks, such as saffron, pennyroyal, or catnip tea, or vinegar whey, should be freely given, if the stomach will retain them; but should the stomach be irritable and the vomiting frequent, very small quantities only of liquids should be allowed, and these must be of a nature calculated to allay the sickness. For this purpose, toast-water, spearmint, or small draughts of soda-water, are among the most suitable. A strong mustard poultice applied over the pit of the stomach is often a valuable remedy for the sickness and vomiting. Should there be sickness or oppression of the stomach, without much vomiting, attended by headache, and the bowels be costive, a gentle emetic of ipecac. or warm thoroughwort tea may be attended with beneficial effects; and should it not operate upon the bowels, may be followed by a small dose of castor-oil, Epsom salts, calcined magnesia, Rochelle powders, or some other gentle physic. Powerful emetics and cathartics are not only unnecessary, but decidedly injurious, in every stage of the disease.

The second or eruptive stage of the fever may be reckoned from the second or third day to the seventh or eighth, during which time the patient should be kept perfectly quiet; if possible in an airy room, from which the light should be excluded. The bed-clothes, as well as the body linen, should be light, and frequently changed, and in every particular the greatest attention should be paid to cleanliness and the general comfort of the patient.

No solid food of any kind will be required or allowable. Patients with this fever suffer much from thirst,—a strong indication that liquids are necessary and proper,—and as, after recovering from the first shock of the disease, the stomach will generally retain them in any reasonable quantities, cold water, lemonade, barberry or tamarind water, thin gruel, rice-water, balm or flax-seed tea, or some similar unstimulating beverage, should be liberally allowed, both as the means of contributing to the present comfort of the patient and of mitigating the fever. Should the bowels be confined, an infusion of elder-flowers and mullein is an excellent domestic medicine. A tea-spoonful of cream of tartar, dissolved in a pint of flax-seed tea and sweetened to the taste, and drank at intervals, may also do well under these circumstances. If the costiveness prove obstinate, a small dose of castor-oil, Epsom salts, calcined magnesia, and rhubarb, or Rochelle powder, must again be resorted to. With the view of promoting the action of the skin and kidneys, the spirits of nitre, in doses of from ten drops to a tea-spoonful, according to the age of the patient, may be given every two or three hours, in cold water, or some other simple vehicle. The nitrate of potash, —saltpetre,—being one of the best refrigerants with which we are acquainted, and also an excellent

local application to an inflamed and ulcerated surface, appears to be admirably adapted to the cure of this disease. By coming in contact with the ulcers in the throat in being swallowed, it answers the purpose of a gargle, and in the stomach it exerts a favorable influence upon the fever. It may be given every three or four hours, in doses of from one to ten grains, dissolved in sufficient water to make a tea-spoonful a dose for a infant, or a table-spoonful for an adult. Ipecac. is a very safe medicine, and as it promotes the healthy secretions of the stomach and bowels, and also operates upon the skin, is well adapted to the treatment of scarlet fever. The dose should not be so large as to nauseate much; from a quarter to half a grain for a child, or a grain for an adult, may be given every three or four hours, mixed with molasses or syrup, or combined with either of the medicines before mentioned. Bleeding, though highly recommended by some, is seldom necessary, and should be resorted to with great caution. Cases may occur, however, when the fever settles upon the brain, or some other important organ, in which bleeding from the arm, or, what is preferable, by leeches, applied to the part most affected, will be followed by relief, and perhaps contribute to the restoration of the patient. Some physicians of eminence are partial to the use of calomel in this disease, and it is highly recommended by some of our most popular authors; but never having seen any beneficial effects produced by it, we have long since ceased to give it, and mention it here rather to enter our protest against its indiscriminate employment than to recommend it.

The muriatic acid is much used by some physicians of eminence in all severe cases of the disease; and, as it combines tonic with febrifuge properties, would seem to be well adapted to the nature of the complaint. We have prescribed it somewhat extensively, however, without any very striking advantage from it, and of late only recommend it in those cases in which there is great debility and an obvious tendency to putridity. The most convenient form of giving it is to drop into a half-pint *glass* tumbler forty-five drops of the acid, fill the tumbler with water, and sweeten with loaf sugar or honey. A dose of a tea-spoonful for a child, or a table-spoonful for an adult, may be given every two or three hours. In extreme cases, these quantities may be considerably increased without danger.

One of the most powerful, and at the same time most pleasant, means of carrying off the inordinate heat, and subduing the raging fever, is a persevering application of moderately cold or tepid water, vinegar and water, or weak spirit and water. When the heat is very great, it may be applied over the whole surface of the body with a sponge or soft cloth; but if the heat be moderate and confined to the head, it should be applied to the head principally. If the sensation produced by the application of cold be agreeable, we may expect a beneficial effect from it; but if it be disagreeable, it will be doubtful, and tepid or warm water should be preferred. Extremely cold water or ice gives a shock to the system

that will be followed by reaction more or less violent, and an increase of heat; whereas that which is moderately cold or tepid, though it evaporates quite as rapidly, and consequently dissipates fully as much heat, is not liable to this objection. Whenever the heat of the body is greater than natural, it will be perfectly safe to keep up a constant evaporation from its surface. This should always be the criterion, for if the temperature be below the natural standard, the application of cold, by too much exhausting the vital heat, may prove injurious.

None, except those who have experienced them, can conceive of the agreeable and soothing effects of bathing with cold or tepid water, when suffering from the scorching heat of this fever.

The introduction of this practice is among the greatest improvements that have ever been made in the medical art, and has conferred upon mankind one of the most inestimable blessings. It is worth all other remedies, and has justly immortalized the name of Dr. Currie, by whom the practice of cold effusion was first introduced.

When there is a tendency to typhoid or putrid symptoms, indicated by great prostration, a recession of the eruption, or the eruption changing to a purple or mahogany color, delirium very frequent, small pulse, deep-red tongue, or the fur upon the tongue being of a dark-brown color, and the ulcers in the throat becoming gangrenous, the disease has been called malignant or putrid sore throat, scarlatina maligna, and treated of by authors as a distinct variety. As, however, the scarlatina maligna is produced by the same influences, appears simultaneously with and under the same circumstances, as scarlatina anginosa, it appears more rational to treat of this form of the complaint as only aggravated cases of the disease under consideration.

In violent attacks, the system, which may be in an unfavorable state to bear the shock, soon sinks under its deadly influence, and, the powers of life being insufficient to sustain the vital functions of the different organs, putridity supervenes as a natural consequence.

In this form of the disease the remedies must be of an entirely different class. Whether the putrid symptoms come on in the course of the fever, or begin with it, is immaterial as respects the treatment; the symptoms above mentioned are sure indications that the system is yielding under the poisonous influence of the morbid cause, and unless it can derive some support from timely and judicious means, will probably sink into an irremediable condition. With the view of sustaining the system and stimulating it to the performance of the vital functions, tonics and stimulants must be administered according to the circumstances of the case. In well-marked cases of putridity, the quinine is perhaps one of the most appropriate tonics; a dose proportioned to the age of the patient should be given every four hours; at the same time, Lisbon, Sicily, or old Madeira wine, in the form of wine whey, or mixed with toast-water, should be frequently administered in small quan-

tities. Cayenne is a remedy of much value in these cases. It may be given in the form of tincture, hot-drops, infusion, or mixed with hot sweetened water. As diffusible stimulants, the aqua ammonia, spirits of hartshorn, carbonate of ammonia, salts of hartshorn, and camphor, are among the most advisable; when the head is affected, camphor may be given in liberal doses in the form of a powder, mixed with syrup, or in emulsion combined with the ammonia.

Much importance has ever been attached to the use of gargles in all stages of the disease, and for this purpose innumerable preparations have been proposed. When chosen with reference to the stage and nature of the case, they are unquestionably among the most reliable means which can be employed, either to render the condition of the patient more comfortable, or to promote a healthy action in the ulcers. During the first four or five days, while active inflammation continues, stimulating and acrid gargles are seldom beneficial, and often aggravate the local affection; but the most soothing effects are experienced from the frequent use of those that are mild and unirritating. Warm water, flax-seed or slippery-elm tea, and gum-arabic water, are perhaps the best. The constant employment of these has the effect of a soothing poultice to an inflamed sore, and besides assuaging the pain, very much lessens the difficulty of swallowing. As very small children cannot gargle, a tea-spoonful of one of these should frequently be put into the mouth and allowed to be swallowed. Toward the termination of the second stage, those that are somewhat stimulating will be proper. Sage tea sweetened with honey, and a solution of borax, are often used with happy effects, but perhaps one of the best domestic gargles is made by dissolving common salt in equal quantities of vinegar and water, and sweetening with honey or loaf sugar. No bad effects need be apprehended from its being swallowed in small quantities.

In those cases in which there is an evident tendency to gangrene and sloughing, cayenne pepper, myrrh, Peruvian bark, and chloride of soda, must be resorted to. Physicians often use the white vitriol and lunar caustic. The former may be dissolved in water, in the proportion of twenty or thirty grains to half a pint. If the lunar caustic be used, it should be dissolved in the proportion of from four to eight grains to the ounce of water, and applied with a small swab, or the ulcers may be touched with it in substance. The inhalation of the steam of water or herb tea, or, if a stimulant be indicated, of myrrh and vinegar, is sometimes preferable to gargles, and should always be used in aggravated cases.

In regard to the advantages of blisters and other external applications to the throat, some diversity of opinion prevails. Blisters are much used by some, but when applied directly upon the seat of the principal irritation, it certainly may be questioned whether they do not add at least as much as they take from the local disease, to say nothing of the general disturbance which they occasion. At the onset of the disease, if the throat be painful, a mustard poultice, a bag of hops, or some kind of herbs steeped in vinegar

or a flannel moistened with volatile liniment, may be applied; but during the hot stage these are uncomfortable, inconvenient and uncertain remedies. If anything is necessary at this time, evaporating lotions of spirits of camphor, alcohol and water, ether, or a warm soft-bread poultice, should be preferred.

Scarlet fever, even when mild, is sometimes followed by an affection of the windpipe, the symptoms of which very much resemble those of croup, and though differing in its nature from that disease, has commonly been called by the same name. Should symptoms of this affection come on, an emetic of ipecac., or ipecac. and white vitriol, may be administered, hot fomentations be applied to the neck, and the steam of water, or an infusion of emollient herbs be frequently inhaled, as the most rational means of cure. If the general system be in a favorable condition to rally, tracheotomy may be worth a trial as a dernier resort. This affection, to say the least of it, is alarming, and is fortunately very rare.

A much more frequent sequel to the scarlet fever is a dropsical effusion into the flesh or some of the cavities of the body. In these cases, active physic and diuretics, combined with mild tonics, are the remedies upon which we must depend.

Calomel, though not to be depended upon during the continuance of the fever, is here an invaluable medicine. It may be given in doses of from five to fifteen grains, combined with jalap, rhubarb or castor-oil, and be repeated until it operates upon the bowels.

Cream of tartar and jalap, calcined magnesia, Epsom salts, and senna, are valuable medicines for this purpose, and if preferred may be used instead of the calomel. As diuretics, or those medicines that tend to increase the secretion of urine, the spirits of nitre, liquor potassæ, acetate of potash, and digitalis, —foxglove,—are some of the most potent. Dogsbane, —apocynum cannabinum,—is a powerful cathartic and diuretic, and is well adapted to the treatment of dropsies; as, however, it is very active, caution is necessary in administering it to children. One ounce of this root may be steeped in a pint of water, of which a table-spoonful is a dose for a child of two years, to be repeated every two hours, until some effect is produced upon the bowels. As a domestic remedy in this and other kinds of dropsies, perhaps there is no one equal to the cleavers, —goose grass. An infusion of this weed may be given with great freedom, and with almost certain benefit. Its activity will be increased and its taste improved by being acidulated with cream of tartar.

It has been observed that swellings upon the neck often continue after the subsidence of the fever, and this is among the most common consequences of the disease. Should this occur, a plaster of white diachylon, or Noel's plaster, may be applied over them for a few days, until it can be ascertained whether they are disposed to disperse, or to come forward and suppurate. If the tendency be to suppuration, the process may be hastened by warm flax-seed

or bread and milk poultices; and if they do not break spontaneously, they may be opened with a lancet, when a cure will soon be effected.

Pains in the limbs are not uncommon during convalescence. As the strength is regained, these will subside. The pain may be mitigated by frictions with spirits of camphor, alcohol or stimulating liniments, a due attention to the bowels, the diet, and moderate exercise. Tonics and mild anodynes may be required if the pain be great and attended with extreme debility.

The belladonna has been proposed and extensively tried as a prophylactic or preventive of the disease. The testimony which has been adduced is very conflicting, but upon the whole shows a balance in its favor; and as an experiment will be harmless, whenever the disease is prevalent, or when persons are liable to take it by contagion, a trial of it should never be neglected.

Should it, upon further trial, prove to be a certain preventive, or lessen the number of cases one half, the discovery will deserve to be ranked among the greatest improvements that have ever been made in the medical art.

Three grains of the extract are dissolved in one ounce of boiling water, and of this solution eighteen or twenty drops are a dose for adults, and as many drops as a child is years old, for children, to be taken three times a day.

The prognosis of scarlet fever is exceedingly difficult and uncertain. It is a common remark of the best authors and most experienced physicians, and a remark which we have too often seen verified, that the patient will sometimes be cut off suddenly, when, judging by all the appreciable signs, we have no reason to apprehend such a result; and, on the other hand, we not unfrequently witness cases where the patient lies for days in what appears to be the most alarming condition, and yet ultimately recovers.

If, in the course of the disease, the eruption, instead of continuing florid, becomes purple or mahogany color, and the extremities assume a bluish appearance, attended with delirium or insensibility, great prostration, and a twitching or starting of the tendons, death is much to be apprehended. Great and sudden swelling of the throat, the non-appearance or sudden disappearance of the eruption, dependent upon great prostration or a failure in the powers of life to throw it out, and gangrene in the throat, are alarming symptoms. Croup, supervening upon the scarlet fever, is perhaps always fatal. Dropsy, coming on after the subsidence of the fever, may generally be cured, except it be located upon the brain or in the chest, in which cases, the former especially, death may be expected. On the contrary, should there be a general and universal perspiration, the eruption continue of a bright florid color until the fever subsides, and then gradually fade, the swelling of the neck be inconsiderable; if there be no appearance of gangrene in the throat, the mind continue clear, the sleep tranquil, and the strength good, the patient will probably recover.

Cases frequently occur in which, after the fever has declined at the end of a week, it is again kindled up and continues on to the end of another week, when it may prove fatal, or a recovery slowly take place. The vitiated state of the blood, the skin not resuming its healthy functions, the irritation of the inflamed glands, and other consequences of the disease, are the probable causes of this relapse, or rather protraction of the fever.

SEBACEOUS GLANDS.—Those organs or vessels which secrete a fatty matter.

SECERNENT.—A lymphatic or other secretory vessel.

SECRETION.—This is the evolution or formation of different kinds of matter from the blood, as the urine, the sweat, the bile, the milk, the mucus, the menses, the tears, and the ear-wax. The organs and structures destined for this purpose all have a different organization, although they operate upon the blood.

Secretion is the operation by which the glands and glandular structures separate from the blood, from the fat and other substances, a peculiar fluid or new matter. Thus, the kidneys separate urine from the blood, and the lymphatic or absorbent vessels separate lymph from the fat and other solid parts of the body. The fat itself is separated from the blood by secretion. The glands of the eyes separate the tears, and those of the mouth the saliva or spittle. Even the venous or purple blood seems to be a secretion from the arterial. The oxygenation or vivification of the blood is a separation of one of the constituents of the air by a glandular action of the lungs. Indeed, the secretion of a fluid or other matter, in the human body, is a genuine play of chemical affinities. The vital blood is a secretion from the digested food and the air.

By the discovery of endosmose and exosmose, it has been found that gases, acids in a state of gas, vapors, and liquids, will pass through moist membranes and combine with each other. This discovery is a strong additional evidence that secretion is merely a formation of new products by chemical action. Indeed, when we consider that the bile, the milk, the tears, the spittle, the phlegm or mucus, the gastric juice, and the sweat, substances distinct in their nature, all proceed from vessels composed of the same flesh and blood, we are compelled to admit that the power of chemical attraction can alone produce such results. We have ascertained by experiment that a heat of ninety or ninety-five degrees, acting upon milk, for six or eight hours, will invariably produce a chemical decomposition, that is, convert it into curd, whey, and an acid, or, in common language, will turn it sour. The simple agency of a blood heat or less, therefore, produces as great a change in this fluid as any that is effected by the living vessels.

The strongest clue to the mode in which secretion is accomplished is the change of venous into vital blood by combining with the oxygen of the air. The purple, lifeless blood, is converted into a new, vital fluid, of a different color, merely by the presentation of air, a part of which unites with it, as any two bodies which have an attraction for each other unite, and form a new fluid.

The saliva, the sweat, the milk, and other fluids, are doubtless formed by the same laws. Physiologists have been exceedingly cautious in admitting the existence of a purely chemical action in the new products of animal bodies; but we know of no other mode of action, and until we do, our analyses of unknown processes must be explained by this species of operation.

The idea that bile, milk, and sweat, are formed from the blood, in the same way that a tub of warm milk is changed into curd and whey, by a drop of acid or by the continuance of a blood-heat for a few hours, is novel; but it approaches the truth more nearly than any other explanation which can be given, and may prove to be the true mode by which the secretions are effected.

The conversion of the food into chyle is another process, for aught we can see, of a purely chemical nature; as much so as when the acid of the stomach is corrected or neutralized by an alkali. In this process, bread, meat, and other substances, are thrown into a vessel containing gastric juice, saliva, pancreatic liquor, and bile, and in the course of an hour or two the product is a new, white, milky fluid. The whole work seems to be done very much as milk is changed into curd and whey. We may know more of the actual process of digestion and of secretion hereafter, but thus far we may go with safety.

To increase or hasten the secretions is one of the modes of curing diseases. In inflammations and inflammatory fevers, there is no one mean more common, and but few more effectual. Some rely chiefly upon sweating, others upon exciting the alimentary secretions, the bile and other juices poured into the bowels; some, again, upon an increase of the urine. Each and all of these modes have a tendency to abate inflammation, to moderate fever, and lessen the force of the circulation. Neither of these evacuations, however, removes any portion of the entire blood. This can only be done by blood-letting. A patient sick with the peripneumony may be sweated and purged, but, by this means, we can never be sure that we have removed that part of the blood which produces the inflammation.

If the arterial blood, which is probably the inflammatory part of it, could, in a great measure, be cut off from an inflamed organ or part, there could not be much doubt of the subsidence of the inflammation. Blood-letting, in a measure, imitates this effect; it removes a portion of the entire blood. An increase of the secretions is not certain to accomplish the same end. We would not be understood to advocate the practice of wholesale, indiscriminate blood-letting; on the contrary, we are glad to see it dispensed with whenever it can be done with safety. Everything in the practice of medicine should be settled by observation and experience.

SCIATICA.—A rheumatic disease of the hip-joint. The remedies are such as are used for rheumatic affections in general. See *Rheumatism*.

SCIRRHUS.—The scirrhus is, in most instances, an enlarge-

ment of a part or the whole of some glandular structure of the body. In the beginning it is merely a hard, insensible lump under the skin. As it increases in size, it becomes uneven on its surface, its veins are enlarged, the skin which covers it becomes shrivelled and puckered, and the lump assumes a livid or purple hue, with a greater or less degree of pain.

In some instances there is no tumor or enlargement of the part, but merely a contracted, hardened, shrivelled spot in the flesh. This is often the case with scirrhus affections of the breasts and the axillary glands. After one gland has become affected, all the glands upon the surface of the body are apt to be successively diseased in the same way.

The main thing to be done in case of scirrhus is to adopt an unirritating, vegetable diet, to keep the part free from friction and wounds, and to avoid all intemperance. In some cases they are absorbed, and in others, if not irritated by corrosive applications, will remain stationary for life.

The best application which we have ever known for a scirrhus is Lord Noel's leaden plaster, commonly called the lead plaster. It should be worn constantly, and when it has been on a week or two, it should be changed. The diachylon plaster is often applied.

Where they threaten to become cancerous the practice is to remove them by the knife.

SCROFULA—King's Evil.—See *King's Evil*.

SCURVY—Scorbutus.—The scurvy, once so formidable and fatal to navigators and seamen, is now a manageable disease, and by proper care is almost always avoidable. The disease appears to be the consequence of remaining too long at sea, and subsisting too long upon salt provisions and putrid water. In damp dwellings, deprived of light and air, where cold and the want of food and cleanliness impoverish the blood and weaken the powers of life, the same disease will sometimes occur, but this is rare compared with the instances which happen at sea.

The earliest signs of the scurvy are languor, loss of strength, and depression of the mind. The sailor has no heart to work, to play, or to move. The face and skin are pale and bloated, and the breath gives forth a putrid smell. The gums are red, soft, spongy, swelled, and so tender to the touch as to bleed on the slightest injury, and sometimes spontaneously. The teeth become loose and fall out. The skin is, in some cases, rough, and in others smooth and glossy, and covered with bluish or purple spots. These blotches spread and unite together, forming large patches of discolored skin. They appear to be produced by dissolved blood which has escaped from the ruptured capillaries or extremities of the arteries and veins. These small vessels, too attenuated and rotten to retain the blood, give way, and the purple fluid spreads and settles under the skin. Ulcers break out in various parts of the body, from which a fetid smell arises, and a putrid sanies is discharged. These ulcers assume a spongy

appearance, and are covered with a thick crust, which forms anew as soon as it is removed. Sharp pains are felt in the bones and various parts of the body. The pulse is weak and soft, but seldom quick. There is seldom or never any fever. The thirst is not inordinate, and the appetite good. All the secretions have an offensive smell. The urine and the discharges from the bowels border on putridity. The flesh falls away and becomes soft, and even the bones are affected with a kind of rottenness, and break on the slightest pressure.

In the worst cases, blood is discharged from the bladder, bowels, nose, and mouth; and the slightest exertion brings on faintness, and often immediate death. The sense of weakness is never equal to the actual loss of strength, and seamen often die in the attempt to reach the shore by their own exertions.

There is every possible grade in the severity of the disease and the degree in which the blood and flesh are tainted. Some will be wholly disabled from exertion, and covered with purple blotches, while others will be able to keep upon their feet, and assist in the management of the ship.

The disease is so evidently owing to being too long at sea and the use of decomposed food and drink, that the only sure remedy for it is to return to the land, and refresh the system upon wholesome meat and vegetables.

It matters but little how long the voyage is, if the crew frequently return to the land and procure fresh water and new provisions. Fresh water is as essential as fresh food. All intemperance hastens and exasperates the disease. It is now the custom of our whale-ships, which uniformly make long voyages, to seek the land often, and take in a fresh supply of water and provisions. The oftener this is done, the safer and more hardy will be the seamen. The civilization of the islands in the Pacific has wonderfully favored this branch of navigation, by the friendliness of their inhabitants, and the greater amount of provisions which they furnish, as well as the safer depots which they afford to the stores which are landed upon them.

Domestic Remedies.—As far as possible, cleanliness and dry clothes should be aimed at by all seamen. Even where they are obliged to live upon tainted provisions and bad water, the disease will make much less progress, if the skin is kept clean, dry, and comfortably warm. Spruce beer is easily made at sea if the essence is put up, and is a very good antidote to the scurvy. Rice and molasses, or any kind of bread pudding and molasses, are also good antidotes to the scurvy. The meat should be freshened as much as possible, and a drink should be made of the salts of lemon, sugar or molasses, and water. Cream of tartar can always be carried to sea, and it makes a very good drink by adding a tea-spoonful to a pint of water. Any kind of beer which can be brewed at sea will very much retard, and sometimes cure, the disease. The medicines proper to be used in the scurvy are Peruvian bark wormwood, the acetate of ammonia, quinine, and

all the bitter vegetable substances. The quinine, in two grain doses, twice a day, morning and evening, will in general be found the most effectual. Sour drinks, made from the juices of vegetables, are the most perfect antidotes to the disease. Lemons, oranges, plums, all kinds of berries,—blackberries, strawberries, whortleberries,—grapes, and all kinds of esculent plants which can be eaten raw or boiled, are found effectual in restoring the blood to its purity. Scurvy-grass, water cress, and wood sorrel, are all valuable remedies in this disease. Where the bowels are costive, cream of tartar should be used; and if too loose, recourse must be had to morphine, laudanum, or a tea made of logwood. Alum-water should be applied to the gums; and if hemorrhage takes place from the bowels or bladder, four or five grains of it must be taken in powder, once in two or three hours. The soda-powders are a good thing to carry to sea; but the most important thing in the prevention of the disease is a plentiful supply of vegetable food.

It is of the utmost importance, in this disease, that seamen should not be over-tasked, and when down sick with it, that they should be moved with the greatest care, lest the spark of life should be suddenly extinguished.

Every ship should be well supplied with dried fruit, such as raisins, prunes, currants, whortleberries, and filberts. Peas, rice, beans, flour, and flour biscuit, together with sugar and molasses, the essence of spruce and of lemon, and dried herbs, such as balm, sage, and pennyroyal, should never be wanting in a voyage to sea. Vinegar can be made at sea from molasses and water, exposed to the sun; and this acid tends greatly to prevent the scurvy. The sal nitre, dissolved in vinegar, has been found of singular use in the disease, both as a medicine and as a wash to the skin. Two ounces of the nitre dissolved in a quart of vinegar, and given in a dose of two table-spoonfuls twice a day, and gradually increased, has been attended with the happiest effects.

SCURVY-GRASS.—*Cochlearia Officinalis*.—The scurvy-grass is often cultivated in gardens, but may be found wild upon the sea-shore, and in mountainous places. It is a stimulant and diuretic. The fresh plant may be eaten in any quantity, or its virtues may be extracted by pressure, infusion in wine, water, or by distillation. By distillation it affords a strong, pungent, essential oil, which has the same effect as the plant itself; the fresh plant is, however, preferable in medicine. The juice is often mixed with the juice of oranges.

SEDATIVE.—Medicines which procure sleep and ease pain, such as opium, hyoscyamus, hemlock, quinine, with many others

SEMEN.—The spermatic secretion. This secretion often becomes excessive by improper indulgence, by voluptuous conversation, books, and pictures, but above all, by a perverted imagination. The nervous exhaustion consequent upon this excess is manifested by listlessness, paleness of the skin, incapacity of fixing the attention long upon any particular subject, nocturnal

emissions, horrors, dyspepsia, and nervous derangement. Like the secretion of the bile, milk, urine, and perspiration, it can never exist in excess without a corresponding diminution of the strength and energy of the body and mind. Indeed, excess in the spermatc secretion has a more enervating effect upon the brain than in that of any other in the body.

The true remedy is early marriage, which should be encouraged not less by the tendency of the laws and usages of nations, than by individual efforts. Next to this must be placed the effects of active and industrious pursuits.

SENECA.—Rattle-snake root.

SENNA—Cassia Senna.—There are several varieties of cassia, —the plant which furnishes the leaves and pods called senna. The best kind grows wild in Upper Egypt, Nubia, Sennaar, and other parts of Africa. That imported from Egypt is called Alexandria senna. It is an important article of commerce in that country. The plant, in some parts, yields two crops a year. They are cut and dried by the natives; the leaves and pods are stripped off, packed in bales, and sent to Alexandria for exportation. The different varieties are often mixed, and the better kinds are frequently doubly adulterated by being mixed with the leaves of other plants, as well as with the poorer kinds of senna. It was first used as a medicine by the Arabians, in whose works it was noticed as early as the ninth century. Senna has a faint, sickly odor, and a bitter, sweetish, nauseous taste. Its virtues are extracted by water and by alcohol. One pint of water extracts the strength of an ounce. It is usually prepared by infusing it in hot water, with aromatic seeds and manna. The dose of the powdered leaves is from half a drachm to a drachm, which may be mixed in molasses or other syrup. Of the infusion, prepared by steeping an ounce in a pint of water, the dose for a child four or five years old is a wine-glassful, and for an adult half a pint, and half the quantity may be repeated every six hours until it operates. The addition of aromatic seeds, manna, and salts, renders it more active and agreeable in its operation. It should be steeped about twenty minutes in a covered vessel. Its virtues are dissipated by boiling. Senna is an active cathartic, and is very generally used, both by physicians and as a family medicine, in constipations, colds, coughs, colics, fevers, and all cases requiring a medicine of this kind. We are by no means disposed to deny that senna is, in some cases, a suitable and valuable medicine, but it is one to which we are far from being partial, and we seldom prescribe from preference. In dysentery, bowel complaints, in cases of women in child-bed, and young infants, we consider it decidedly inadmissible. The great objection to it as a family medicine is, that it often produces intolerable and long-continued griping; it purges off too much of the natural mucus or slime of the bowels; sometimes occasions bloody stools, and other symptoms simulating dysentery; and in affections of the bowels, aggravates or predisposes to inflammations. The least objectionable

form of using it is that of the lenitive electuary. It enters largely into the composition called cathartic infusion, an agreeable preparation when the use of senna is indicated. The griping and other disagreeable effects produced by senna are best relieved by injections of laudanum and starch, the warm bath, and repeated small doses of opium, or some of its preparations.

SERUM.—The watery part of the blood. All the watery secretions of the body are called serous. The water drawn off by paracentesis in dropsy is serum. The vapor exhaled into the cavities of the belly and chest is also serum. Serum coagulates by moderate heat, resembling the boiled white of an egg; indeed, in a thousand parts of the serum there are eighty parts of albumen,—the precise substance of the white of eggs,—nine hundred and five parts are water, six muriate of potash and soda, four lactate of soda with animal matter, and four of soda and phosphate of soda with animal matter.

SHINGLES—Herpes Zoster.—A species of herpes, and by some considered as a variety of erysipelas. This is an inflammation of the skin, consisting of small orbicular elevations, containing lymph, and terminating in a scurf or scab. These elevations are in clusters or groups, and frequently spread or creep around the body in the form of a belt, dying away in one place and coming out in another. They are attended with more or less itching and smarting, and when extensive, may be preceded by cold chills and fever. It is a popular opinion that, if the body be entirely encircled by the eruption, death may be the consequence; but for this opinion there is not the shadow of a foundation, nor is there the least necessity for the application of the disgusting remedies that are in use among the uninformed, among which may be mentioned a *black cat's skin*, applied immediately after its removal from the body of the animal. The disease is seated in the superficial vessels of the skin, and has but little if any connection with the general health of the system, being strictly local.

Remedies.—A light vegetable diet, cooling cathartics of cream of tartar or salts, keeping the body cool, and the frequent application of alcohol and water, or a bread and water poultice, are all the means necessary for a cure. The disease is never dangerous, and usually passes off in the course of a fortnight.

SIMPLE CONTINUED FEVER.—See *Fever, Continued*.

SINAPISM.—A mustard poultice. It is made either by mixing ground mustard with vinegar, or by adding a quantity of mustard to a rye-meal poultice.

SINGULTUS.—Hiccough.

SKUNK CABBAGE—*Ictodes Fetidus*.—This plant, common in the bog meadows of New England, has leaves nearly as large as those of a cabbage. Its smell is strong and disagreeable, resembling that of a skunk. The root is highly anti-spasmodic. In the asthma, hysterics, convulsions, epilepsy, whooping cough, and even dropsy, it has produced very signal relief. The dose of

the powdered root is half a drachm, three times a day. It may be given in the form of a strong tea, in the dose of a wine-glassful, or in that of a syrup, in the dose of a table-spoonful. Some have extolled the skunk cabbage in consumptive coughs. It is undoubtedly a medicine of some power, and deserving of attention. The right use of our domestic plants is often attended with the happiest results.

SLEEP.—Sleep is a function of the brain, without which we can no more exist than without food or drink. It is promoted by a cool air, labor, silence, and sufficient food. Sound, sweet, perfect sleep seems to be the lot of the poor laboring man. This is his peculiar boon. Much care and concern destroy sleep or render it unrefreshing. Excitement of any kind is unfavorable to it. Darkness, as well as cold, favors sleep. Much pain or distress of any kind is incompatible with it. Warm rooms are unfriendly to sound, healthy sleep.

People should have a care that they do not lose their sleep by violent passions, emotions, and resentments, since once destroyed, it ends in insanity. This function of the brain is intimately connected with diseases of the mind. Regular hours of sleep, like regular hours of eating, contribute greatly to a sound state of both body and mind.

Some people require more sleep than others in the same employment. People troubled with the nervous disease need more sleep, or more hours of sleep, than those in sound health. From six to eight hours is long enough for a well person to sleep.

Where wakefulness prevails, the attendants of the sick should never manifest much concern about the return of sleep, as it will return, like the function of digestion, in its own due time, after the subsidence of the excitement, or irritation which produces it, has passed away. The medical attendant, by an imprudent manifestation of concern about the sleep of his patient, often puts off the period of its return.

It is a great misfortune where people are troubled about their dreams. Dreams often come to pass, but not half so often as our waking thoughts. The fulfilment of a dream is no stranger than that of a waking thought. In general, we take no notice of our waking thoughts, and, therefore, feel no surprise when there is a coincidence between our reveries and subsequent events. The mind rambles on in sleep, by the same laws of association as when awake, taking in everything and everybody in a moment; and if a single thought in sleep turns out to be true, superstition magnifies it into a much greater wonder than if ten waking thoughts should prove true. A person often thinks of all the people he ever knew, ten times in the course of the day. Is it, therefore, any strange matter that one of these persons should come to see him before night? or that one of them should die in a few days? He also dreams of everybody he ever knew, in a sleep of twenty minutes. Is it any stranger that one of them should meet him the next day, or should die in a short time, or be married,

than if he thought of everybody in a revery? Some people never dream; such, it is quite sure, can never foretell any future events. The most marvellous dreams occur in people of weak nerves. It is very singular that people of unsound minds should have more knowledge of what is to come to pass, than those whose minds are well ordered. The ignorant often see more and deeper things in a dream, than ever occurred to the mind of a Newton or a Franklin in the whole course of their lives.

It is quite certain that doleful, haggard, frightful dreams are symptoms of disease, and should be regarded in no other light. The state of the stomach has an intimate connection with the function of the brain; and indigestion can hardly exist without more or less disturbance of the thoughts, feelings, and emotions, whether asleep or awake. It is worthy of recollection, that light suppers are friendly to perfect sleep.

SMALL POX—Variola.—The small pox is the most highly contagious disease of which we have any knowledge. It is taken both by contact with the subject affected with it, and by breathing the air about the diseased person. It is even communicated by the mother to the unborn child; and when the mother has previously had the small pox, and afterwards been with child, and exposed to the disease, the matter has been conveyed through the veins of the mother, and produced the small pox in the child, while she herself has remained in entire health.

The small pox comes on very much like other inflammatory diseases; with pains in the head, back, loins, and bones, faintness, loss of strength, weariness, redness of the eyes, ague fits, thirst, quick pulse, and sickness at the stomach. There is one symptom which differs from the commencement of fevers in general, and most of the inflammatory diseases, and that is a soreness of the throat, but this symptom is not very severe.

The pustules begin to show themselves on the third or fourth day. They first appear in little red spots upon the face, neck, and breast. When pressed with the fingers, they feel like little kernels or shot under the skin. These pimples continue to increase in size and number for three or four days, when they are found to extend over the whole body. The spaces between the pustules are red. Sometimes the disease is very light and the fever hardly noticeable. There may not be more than a dozen or twenty pocks, or the skin may be covered with them. Hardly any two people ever have the small pox alike.

There are two distinct grades of the small pox; one is comparatively mild, consisting of separate pustules, with spaces more or less wide between them; and the other of pustules which run together and form one wide-spread eruption.

If the pustules are distinct, with well marked spaces between them, they reach their full size about the fifth or sixth day, when they begin to suppurate. Before this period, they contain only lymph or a watery matter. The lymph is the proper matter to inoculate with it. The maturation of the pustules is completed on

the eighth or ninth day from their first appearance. If the pustules run together or coalesce the maturation takes up a longer time, by two or three days.

One of the most remarkable appearances in the disease is the swelling of the face, head, and eyes. If the pustules are very thick, it is not uncommon for the eyes to be completely closed up, and the eyelids to be puffed out like little bags. The whole face is red, and the original features hardly discernible. The voice is hoarse, the swallowing difficult, and the throat filled with a tough saliva.

The disease begins to retrograde about the eleventh day. The pustules, now filled with a thick yellow matter, begin to discharge it; they then become dry, form into a scab, and fall off. The swelling of the face, eyes, and head, goes down as soon as the pustules have come to maturity. The scabs are of a mahogany color, and when the pustules are numerous and long in maturing, they leave behind them deep pits or scars, which are at first red, but in time become whiter than the natural skin.

When the pustules spread and run together, forming what is called the confluent small pox, there is always a vehement fever. The heat, faintness, thirst, and sickness at the stomach, are much greater than in the distinct kind; and the pulse, instead of being full and strong, is small and more frequent. In the confluent small pox there is often great stupor and delirium. In the distinct kind of the eruption, the fever usually subsides on the appearance of the pustules; but in the confluent, the fever may undergo a little abatement when the pustules appear, but does not go off. The swelling of the face, eyes, and head, greatly exceeds that in the distinct kind, and the skin, loaded with spreading pustules, resembles more the rough bark of some dead tree than the natural covering of the body. In grown people, the throat is loaded with a tough, thick phlegm; but in children, there is a diarrhœa. The disease in children is commonly ushered in by convulsion fits.

The face, in the confluent grade of the disease, after the eruption begins to scab over, looks as if it were covered with a brown mask, and as the large scabs or scales begin to loosen, its deformity is most pitiable. The disease gives forth an intolerable smell, and the itching is so great that it is often necessary to muffle the hands, especially in children, to prevent the tearing of the flesh. In one case out of three or four, the fluids of the body run into putrefaction; the dissolved blood issues from the nostrils, bladder, or bowels, and death closes the frightful scene.

The most critical period in the confluent small pox is the commencement of the maturation of the pustules, when the fever returns with renewed strength. This is called the secondary fever, and is always attended with danger.

The commencement of the small pox being very much like the attack of measles or chicken pox, it is often difficult to distinguish between them. In the measles, the difference is discernible as soon as the eruption makes its appearance. The pustules, in the

chicken pox, are smaller, fewer in number, and disappear before suppuration, or about the sixth or seventh day. If the measles and small pox are taken at the same time, by the same person, the measles run their course first, after which the small pox pursues its usual course. If the small pox has broken out, and the measles break out the next day, the small pox stays where it is, until the measles have disappeared.

The distinct small pox is not dangerous, unless the eruptive fever is very high; but the fever has as many different degrees as there is difference in the number of pocks. The greater the number of pustules, the greater the danger.

After a person has imbibed the contagion of small pox, the disease usually makes its appearance about the fourteenth day. In some instances, the disease will appear as early as the sixth day after the exposure to the contagion, and in other instances, it will not make its appearance before the twenty-first day.

Formerly it was held that a person could not have the small pox a second time, but of late years it has been fully established, by the amplest observation, that this opinion was an error.

Since the disease called the varioloid has been noticed, much inquiry has been excited upon the subject, and it has been clearly ascertained that this disease is the real small pox appearing in people the second time. It also appears in those who have had the cow pox. The varioloid is comparatively a mild disease and rendered so by having previously had either the small pox, or the cow pox. See *Varioloid*.

Domestic Remedies.—If a person has been exposed to the contagion of the small pox, he should be immediately vaccinated. This will, in many instances, prevent the disease, and in all instances be likely to render it milder, if the contagion has entered the system too deeply to be subdued. The person at the same time should live upon a light vegetable diet, take no stimulating drinks or heating things, and keep the blood as cool as possible, by exposure to cold air, and the use of some cooling cathartics, such as salts or the cream of tartar, taken every day, in a sufficient quantity to move the bowels. The person should abstain from all heavy work, and avoid the heat of the sun. The cooler the person can keep himself without being absolutely chilly, the better. Sour drinks, such as barberry-water, lemonade, vinegar and water, and the cream of tartar water, have no small effect in preventing the violence of the coming fever. The same system, more rigidly enforced, must be pursued after the contagion has taken effect, and the fever has commenced.

Where there is much heat, dryness of the skin, and sickness at the stomach, a tea-spoon even full of ipecac., or the powdered leaves of lobelia, should be given, and a gentle evacuation of the stomach procured. An emetic will favor the full and early eruption of the pustules. The patient should be placed in a cool room, and in the warm weather the windows should be open. The body should be sponged or washed with cold water, at least every evening, and none but cool drinks should be given.

A mattress is much cooler than a feather bed, and less likely to exasperate the fever. The illness is so slight in some cases as to require no medical treatment at all, especially if the system has been properly prepared to meet the disease. A meat diet, after one has been exposed to the small pox, is a suicidal step, and is above all things to be shunned.

If the fever is high, the pustules numerous, and the sleep prevented, the sweet spirits of nitre, or Hoffman's anodyne, must be given in the dose of a tea-spoonful every two hours. The acetate of ammonia, or lemon-juice, and the salts of hartshorn, should be given two or three times a day. The head should be kept cool by the application of wet cloths.

In the confluent small pox, the fever is apt to be of a low type, the pulse small and quick, and there is more or less oppression of the brain. In this case the system must not be too much reduced. The bowels should only be moved with a great spoonful of the cream of tartar, or a couple of tea-spoonfuls of salts, the body bathed with tepid water, and the strength supported with wine whey, grain doses of quinine, twice a day, and Hoffman's anodyne liquor. Frequent potions of strong poppy tea should be given, to allay the excessive agitation of the system, when the eruption appears. A wash of the same may be applied to the face, neck, and chest. A tea-spoonful of the sweet spirits of nitre should be given every three hours. The soda-powders will form an appropriate drink, together with a thin flour gruel, and gum-arabic water. In some cases, where the pulse and strength will admit of it, leeches may be applied to the head. Cold water may be drank freely.

When the swelling of the head and face is great, and the eruption thick or confluent, linen muslin dipped in a very weak solution of sugar of lead, or of white vitriol, should be laid upon them. If the agitation and distress are severe, and the system is likely to become exhausted under the violence of the disease, forty drops of landanum or of morphine should be given. Five drops will answer for a child of one year old, and eight drops for one of two years of age. Children being liable to convulsion fits, must take poppy tea or paregoric, once in six or eight hours.

Professional Remedies.—The small pox is an inflammatory disease, and requires a corresponding treatment. If the fever is severe, the pulse full, hard, and strong, blood should be drawn from the arm in proportion to the force of the circulation, always recollecting that the fever has some days to run, and that the strength must not be permanently reduced. In the confluent kind, bleeding is inadmissible, excepting by leeches, and then very sparingly.

The use of antimony in the distinct small pox will be found very serviceable before the eruption. Calomel, used as a cathartic, will often be found equally beneficial. In general, the fever of the distinct small pox is to be treated like a regular continued fever. Blisters are seldom found of much service, as the whole skin itself

is but little less than blistered by the eruption. Antimony, after the eruption appears, is, for a similar reason, less efficacious than in common fevers. The sal nitre, in eight grain doses, once in three hours, is one of the best medicines which can be used after the pustules appear. It is highly necessary that all filth should be removed from the room, and that the chloride of soda or of lime in solution should be kept constantly evaporating, to purify the air. The chlorides are a modern discovery, which have been found to be powerful agents in neutralizing contagions.

Where the throat is sore and inflamed, and much tenacious phlegm adheres, gargles of borax dissolved in warm water, or alum, sugar of lead, or white vitriol, must be used.

It will sometimes be necessary to cover the face and neck with some mild salve or ointment, when it is in a state of maturation. A salve of bees-wax and sweet oil is as good as anything. Proper nourishment, such as flour porridge, bread-water, rice or rice-water, and Indian gruel, should not be forgotten in any stage of the disease.

SNAKE-ROOT, VIRGINIA—*Aristolochia Serpentaria*.—The Virginia snake-root is a drug peculiar to the United States. It is found in great abundance in the State of Virginia. It consists of small knots of fibres, matted together, issuing from one head. Its color is a light-brown, its taste pungent and bitterish, and its smell somewhat aromatic. It is a warm stimulant, a perspirative, and diuretic. If the force and frequency of the pulse are considerable, it will be improper to give it, as it will prove too stimulating.

The dose, in substance, for an adult, is from twenty to thirty grains. In the form of a tea or infusion, a drachm may be given.

A table-spoonful of the tea, taken every ten minutes, will check the vomiting in cholera morbus. It makes a valuable gargle in putrid sore throat or scarlet fever. In dyspepsia, remittent fevers, and putrid diseases, it is an efficacious medicine. The virtues of the root are destroyed by boiling. It must either be infused in hot water or taken in powder. Taken every morning, it will cure the fever and ague. The plant is entirely different from rattle-snake root or seneca, and must not be confounded with it.

SOAP.—Soap is formed of alkalies and oils. The common hard soap is made with potash and tallow. The potash is dissolved and the tallow added. The Venice, Alicant, or Spanish soap, is made with olive oil and soda; green soap is made of linseed oil; black soap with train oil. The soap used in medicine is made of olive oil and soda. It should be white and hard. Taken internally, it is laxative and detergent. It is seldom given alone, but often made into pills with rhubarb, aloes, and other medicines, being of the proper consistence for this purpose. Castile soap is often used to cleanse and stimulate old sores and ulcers. It is not suited to recent sores. When given internally, care should be taken that acids, alkalies, and earths should not be given at the same time, as they decompose it, and are incompatible with it. Soft soap and water are often given by injection to move the bowels. The volatile liment is a soft soap.

SOOT.—Soot is a popular remedy for colic and the bowel complaints of children. It excites a sweat and cleanses the stomach and bowels. It possesses the same nature with creosote, and may be used for the same diseases. It is given in form of a tea. It may be used with safety in cases of canker in the mouth and stomach. It is doubtless a great preventive of putrefaction, and a good astringent.

SORE EYES.—See *Inflammation of the Eyes*.

SORE LEGS.—Ulcers or sores upon the legs are very common to old people, especially if they have lived luxuriously or intemperately. They are usually accompanied with a swelling of the feet and ankles, and sometimes of the legs. A little spot on the leg becomes red, painful, and sore to the touch, and in a short time ulcerates and becomes an open sore, very difficult to heal. These sores usually form about the ankle, or a little above it. They vary in size from the bigness of a ninepence to that of the palm of the hand. They discharge a great deal of watery matter, which is very corrosive and acrid. In some instances they will be very dry and parched, and much more troublesome than when they discharge freely. A hard, tough, gristly rim or edge forms around them, which appears to be a defence which the life of the part sets up against the further progress of disease. The skin for some distance around will be hard and callous. The ankle joint and muscles of the leg and cords of the foot become stiff, and sometimes almost immovable. As fast as one of these ulcers heals another breaks out. In hot weather they are apt to become very foul, and sometimes fly-blown. The irritation and anguish at such times are intolerable. The general health all the while will be remarkably good.

Some have been of the opinion that these sores are natural issues, which are necessary to the general health, and should not, therefore, be healed. But the same may be said of every other ulcer or sore which breaks out upon the body, the evidence being as strong in one case as in the other. We believe no possible harm ever arose from healing them.

To effect a cure, in these cases, it is absolutely necessary that the manner of living should be strictly temperate both in eating and in drinking. The food should be for the most part of the vegetable kind, and the drink nothing but cold water, or milk and water.

The ulcers should be kept entirely clean by bathing them long and often in warm rain or spring water. They then should be poulticed with rye meal or white bread, and whenever the poultices are changed, the sores should be washed with a solution of sugar of lead. The lead-water is by far the best local remedy which we have ever employed. If the ulcers have become very foul, and give forth an odious sinell, a weak solution of the chloride of lime or of soda should be poured upon them. They may also be washed with a tea made of the wild indigo root; or a poultice, mixed with this tea, may be applied to the sores.

In some instances, where the flesh has lost its vitality or life, the sores should be sprinkled over with calomel or the red precipitate, or touched with the lunar caustic daily, until they begin to heal. The powder of borax or alum, strewed upon the ulcers, will sometimes dispose them to heal.

The swelling, which is of a dropsical nature, may be reduced by taking a potion of jalap or cream of tartar, and keeping the leg and foot in a horizontal position. This method we have often tried, and proved it to be effectual. Very much is accomplished by soaking the ulcers and inflamed skin with warm water. It dilutes the acrimony of the discharge, softens the flesh, and lessens the heat and dryness. Charcoal, finely powdered, sifted through a fine sieve and strewed upon the ulcers, will cleanse them and deprive them of the offensive smell. The covering should be light and composed of linen cloth or lint.

SORE MOUTH, TERMINATING IN GANGRENE—Can-
crum Oris.—This disease is a malignant form of canker, which sometimes makes its appearance in hospitals and asylums for children, and in low, damp places, and ill-aired dwellings. It has sometimes prevailed epidemically. It succeeds the ordinary canker, or aphthous disease of the gums and mouth, in children, which has been described under the article Canker. The gums and mouth are more or less inflamed, attended with fever, for some time before the gangrene commences. It occurs in children who have been weakened by long disease, or who are of a lax and feeble habit, and have been subject to bad air and scanty food.

The patient is languid, listless, and sleepless; wants no food, and is peevish and fretful. He is thirsty, pale, and the corners of the mouth puckered. In a week or two there is much pain in the mouth and gums, the breath becomes fetid, and there is a constant flow of saliva. The gums become swollen, dark-red, spongy, and bleed upon the slightest touch. The salivary glands become tumid and painful. The bowels become loose and the fever is increased. At length the gums separate from the teeth, the teeth fall out, and ash-colored blisters begin to appear in the mouth. In a few days more the whole of the soft parts around the mouth will assume a dark, livid color, and discharge a putrid sanies. From the commencement of the gangrene or mortification the child may live from eight to fourteen days, and in mild cases, with good care and treatment, recover.

There is a mild species of the disease, in which the gangrene appears to be superficial, extending no deeper than the skin, with less constitutional affection. This kind is often arrested by medicine. Gangrene of the mouth is chiefly a disease of infancy.

Remedies.—The diet should be light and nourishing, such as beef tea, mutton broth with rice, arrow-root gruel, soaked gingerbread, and milk and water. The bowels should be moved with magnesia, castor-oil, or rhubarb, if necessary, or their motion restrained by laudanum and astringents. In case of looseness of the bowels or diarrhœa, the logwood tea, or catechu, in powder,

will be proper and useful. Small powders of borax, two grains in each, will operate favorably upon the mouth and bowels. The creosote, as advised in common canker, will be found useful, even in case of gangrene.

The mouth must be often cleansed with alum-water, borax mixed with honey, or a solution of white vitriol, or sugar of lead. When gangrene has fairly commenced, a solution of tannic acid will make an excellent gargle; and if some of it is swallowed, it will assist in arresting the progress of the disease internally. Sage tea, acidulated with lemon, will make a suitable drink. Cold water may, however, be drank freely. Solutions of slippery-elm bark, and gum-arabic or flax-seed tea, will be found soothing to the mouth, gums, and throat. Wine, weakened with water, will be proper.

But the remedy upon which most reliance can be placed is the quinine, either in powder or solution. A grain may be given to a child, from two to five years old, every three hours. The mineral acids must be tried. In general, all those medicines which are given to arrest gangrene in general, may be used in this disease. The livid, gangrenous spots are sometimes touched with a solution of lunar caustic to much advantage.

The fetid smell may be corrected by giving three or four drops of a solution of chloride of soda or lime. This article, also, is one of the best gargles. The whole surface of the skin may be washed with a weak solution of either of these chlorides.

Calomel has sometimes been found useful. The principal remedies, however, are antiseptics and tonics.

For the treatment of sore mouth, previous to the commencement of gangrene, see *Canker*.

SORE THROAT—*Cynanche Tonsillaris*.—What is commonly called the sore throat is an inflammation of the almonds of the ear or tonsils. These two little fleshy balls, called tonsils, are situated on each side of the throat at the entrance of the swallow. These glands secrete a quantity of mucus which is discharged into the throat by twelve different ducts. The mucus mixes with the food, softens it, and prepares it for digestion. An inflammation of the tonsils, or almonds of the ear, may be detected upon the outside of the throat, by a hard, round swelling, just under the ear, at the angle of the jaw. The inflammation in this disease is not always confined to the tonsils, but spreads more or less all over the inside of the throat. On looking into the throat when it begins to feel sore, it will be seen to be of a deep-red color; one or both of the tonsils will be swollen to three or four times their common size, and the inner surface of the throat will be covered with a dry crust, which is the natural mucus dried up by the heat of the fever.

In the inflammatory sore throat, there is, in the beginning of it, a sense of dryness, and pain in attempting to swallow; hoarseness of the voice; a difficulty in swallowing, and a furred tongue. It is commonly ushered in by cold chills, pain in the head and

bones, listlessness, red face and eyes. The inflammation, where it is not checked, will commonly increase for three or four days, and the difficulty of speech, of swallowing, and sometimes of breathing, will be very much aggravated. In the worst cases, the dryness of the throat will almost stop the breath. The pulse is commonly hard, full, and quick, beating from a hundred to a hundred and forty strokes in a minute. The skin is hot, and all the secretions checked or retarded. In some cases white spots will be seen upon the tonsils and the inner surface of the throat. These spots are slight ulcerations, which denote that the inflammation is of a very angry nature. In children, this malady sometimes runs into the croup, and then it commonly proves fatal. In aggravated cases of the inflammatory sore throat, the patient will sometimes become delirious. In general, it is not a dangerous disease. The inflammation in a few days either subsides or runs into suppuration. As soon as the inflamed tonsils burst and the matter is let out, there is the most instantaneous relief. The swallowing, breathing, and the dryness of the throat, begin to amend, and the danger is commonly over.

This disease is exceedingly apt to seize children in the spring of the year and the beginning of winter, when they are much exposed to cold and wet, and to the changes of the atmosphere. We seldom ever visit a child at any season of the year, where the disease is not very apparent, without looking closely into the state of the throat. We have many times found the throat to be the seat of the complaint, when we have been called to see a child for a very different disease, or for a disease which could not be ascertained. The swelling upon the outside will often be sufficient to settle the nature of the disease, without even looking into the throat.

There is another kind of sore throat, with which this may be confounded, and which is very dangerous. It is called the malignant sore throat, which almost immediately runs into ulceration or gangrene, instead of suppuration. Its tendency to run into ulcers has given it the name of ulcerated sore throat. In the beginning of this kind of sore throat, the color of the inflammation is of a much brighter red, and the inflammation itself spreads much more upon the lining or surface of the throat. The redness will often extend over the roof of the mouth and completely encircle the throat. The florid color of the inflammation has given it the name of the scarlet sore throat. The tonsils, in this kind of sore throat, will be hard and swelled, but being covered with ulcerations which deeply corrode them, they are in a very different state from what they are in the purely inflammatory sore throat. In the malignant sore throat, there is commonly an eruption upon the skin, and the pulse is weak and soft; there is great drowsiness, often stupor and delirium, and a deeper affection of the brain. The fever, instead of being of an inflammatory, is of a typhoid nature. For a better distinction of the two diseases, the reader is referred to the article on Scarlet Fever.

The causes of the inflammatory sore throat are very obvious. They are cold; wetness; a chilly, moist state of the atmosphere; exposure to currents of cold air; the transition from hot rooms to the night air; and, in general, every change which checks the perspiration and suddenly cools the blood. From the necessity of breathing the cold, damp air, the throat is always more exposed to inflammations than any other part of the body. The wet, chilly air is constantly drawn through the throat, as through a tunnel, and with a force and velocity incident to no other part, so that, in addition to the effect which cold and wetness have in suddenly chilling the body generally, the throat is particularly affected by their agency.

Domestic Remedies.—In slight affections of the throat, where the soreness, swelling, and difficulty of swallowing are not great, and the inflammatory fever is not high; it is only necessary to confine the person to a warm, dry room; to produce a gentle sweat by hot herb teas; to drink flax-seed, mullein, or slippery-elm bark tea; and to gargle or wash the throat with a solution of white vitriol of the strength of eye-water. This gargle alone we have known to cure the sore throat. It should be used every half hour, and be allowed to remain in the throat as long as it can be held, otherwise but little or no impression will be made by it. In severe cases, where there is difficulty of swallowing, and the tonsils are hard and much swelled, an emetic of ipecac., alum, or lobelia, should be given, and repeated even two or three times, if the disease remains obstinate. A tea-spoon even full of ipecac., or of the powdered leaves of lobelia, will be found a sufficient dose for an adult. If the first dose does not operate in half an hour, as much more, of either, may be given. The patient should be made to drink plentifully of warm water, in order to support a free perspiration. After the emetic has operated, and the stomach is sufficiently settled, eight grains of the antimonial powder should be given, every two hours. The bowels should be unloaded with a dose of castor-oil, Rochelle powders, or any domestic physic, and the external surface of the throat rubbed over with the volatile liniment, or, which we conceive to be much better, a soft, warm, white-bread or rye-meal poultice applied around it so as to cover the whole throat. In the sore throat of children, the poultice is the only local application which some are in the habit of making. The reason for its application appears to us to be the same as if the inflammation were upon the surface of the body. Gargling with warm water greatly promotes the suppuration, or reduces the inflammation when its tendency is to resolution. The diet should be very soft, or liquid vegetable food, such as rice, soaked cracker or bread, and water porridge.

We think the efficacy of the volatile liniment depends upon its tendency to excite a sweat. If it is applied extensively and profusely enough to excite a sweat, it will do good; otherwise it will be of little benefit. We have observed the same thing when it has been applied in rheumatism. Blisters to the arms or to the nape

of the neck, are sometimes very serviceable, although they may almost always be dispensed with. Bathing the feet in warm water, by equalizing the circulation, contributes very much to the cure. All heating teas, hot-drops, and stimulating medicines, are improper; the treatment must be anti-inflammatory.

Professional Remedies.—If the person is full-blooded, or the subject of the sore throat be a child taken in sound health, one good bleeding will be the best and safest means to subdue the inflammation and allay the vehemence of the fever. In case, however, the inflammation of the tonsils is very near suppuration, which may be told by inspection, bleeding will be of no use. Or if there is much ulceration, bleeding will be equally improper. The symptoms, in children, will sometimes so nearly resemble those of croup, that bleeding will often be found necessary. After one bleeding from the arm, it is better to subdue the inflammation by leeches, and the use of those agents which reduce the force of the circulation, such as antimony, ipecac., or lobelia. The medicine called the hive syrup is very suitable for children sick of the sore throat. A tea-spoonful of this, given every two hours, to a child between one and two or three years old, will produce a sweat, operate upon the bowels, and reduce the action of the heart. Two grains of the antimonial powder are a suitable dose for a child of the same age.

People sometimes apply mustard poultices to the feet of children with the view of drawing away the inflammation from the throat. But this we conceive to be a doubtful practice, especially where the fever is high, since it only tends to hasten the circulation of the blood and to disturb the nervous system. Opium, in any form, is generally inadmissible in this inflammation. If the continued want of sleep, and anguish in the throat, should compel us to make use of it, it had better be used in the form of the Dover's powder or the morphine. When we speak of the use of the morphine, we mean the solution of the sulphate of morphine in water, of the strength of laudanum. In all inflammatory affections attended with fever, the evacuation by the kidneys is an important consideration. In the sore throat, a free and copious discharge of urine often relieves the disease more than any other evacuation. The fever is always very sensibly abated by the discharge of a large quantity of urine. For this purpose, there is nothing so effectual as the sal nitre, in eight grain doses, once in two hours during the day. As little medicine should be given in the night as possible, as it always more or less interferes with the sleep. In the malignant sore throat, or scarlet fever, we have often relied entirely upon the discharge from the kidneys, for the cure of the disease. To children over a year old, we give the sal nitre or saltpetre, in doses of about three grains each, every two hours, until a free discharge of urine is effected. The sal nitre is also as good a gargle as can be used in the sore throat of young children. The state of the skin in the scarlet fever forbids the idea of raising a sweat; the determination of the fluids, therefore, should be towards the kidneys.

SPASM. — A contraction of the fibres of muscles. The more common name is cramp or convulsion. All twitchings of the skin and flesh are a species of spasm. Hysteric fits are spasms.

SPEARMINT — *Mentha Viridis*. — The effects of spearmint tea in the stomach are warming and carminative. It raises the spirits, quickens the circulation, and allays pain and sickness of the stomach. It may be found in watery situations, in the vicinity of almost every house in New England. It is a good medicine to raise a sweat, and useful in the colicky pains of children.

SPHACELUS — Gangrene, Mortification. — See *Mortification*.

SPINA BIFIDA. — A tumor in the lower part of the back-bone of new-born children. It is at first of a purple color, but as it enlarges, the color disappears, and it assumes nearly the hue of the skin. The disease is of a scrofulous nature, and the tumor contains a watery matter, which should be allowed to find its own way out. Opening one of these tumors is dangerous. The spina bifida prevents the use of the lower limbs, and commonly an upright position. There is an extreme weakness of the back, and debility of the whole system, although children will live in this situation for several years. The remedies are iron, quinine, elixir vitriol, and tonic medicines in general; cold bathing, braces to the back, and a nutritious diet.

SPINAL DISEASES. — In considering spinal diseases, it is necessary to premise that what in common language is called the spine is composed of a number of different parts and structures, each of which is subject to its peculiar diseases and derangement of function. In the centre is the spinal marrow, which may be considered a continuation of the medulla oblongata, or that elongated and contracted portion of the brain which passes out of the skull into the spinal canal, and which is continued down to the termination of the back-bone. From this organ or elongated brain are given off thirty-two pairs of nerves, which pass out through appropriate holes or foramina in the bony structure, to be distributed to the different organs of the body. Through the medium of these nerves, the nervous principle, which endows every part of the system with motion and sensation, is transmitted; and any disease, injury, or other derangement of the spinal marrow, necessarily impairs or destroys motion and sensation in those parts of the body whose nerves arise below the portion affected.

The spinal marrow is surrounded by three membranes, corresponding in structure and function to the membranes of the brain.

The spinal marrow and membranes are enclosed within the spinal canal, and completely protected by the bones and connecting ligaments of the spine.

The spine is covered externally by several large fleshy muscles, giving great strength, mobility, and symmetry of form to the back.

The diseases of the spinal marrow and membranes, which are not easily distinguishable from each other, though not as numerous, are similar in their nature to those of the brain and its membranes. Among those most fully ascertained, and of most frequent

occurrence, are inflammation, suppuration, induration, dropsy, atrophy or a wasting of the substance of the spinal marrow, and hypertrophy or an increase in its volume, and the immediate effects of injuries.

The consequences or symptoms of these affections are, in general terms, intense pain in the spine; rigidity or violent spasms of the voluntary muscles, sometimes producing locked jaw; a sense of constriction around the neck, back, or loins, according to the part of the spine affected; constipation, retention of urine, and paralysis; to which may be added, increased pain on motion, resembling the pains of rheumatism, exalted sensibility, lassitude, and derangements in the circulation of the general system.

The danger and degree of violence of the symptoms will depend upon the severity in character of the disease of the spine; and when paralysis occurs, it is usually in those organs situated opposite or below the affected part.

The treatment of spinal affections must be regulated upon general principles: inflammation requiring bleeding, cupping, and counter-irritants, and the internal administration of cathartics, refrigerants, and sedatives; dropsy must be combated with the same remedies which dropsies of the brain and other organs demand; hypertrophy must be treated by the iodides, mercurials, alteratives, and counter-irritants; and other affections according to the indications manifested in each individual case.

The bony structure of the spine is often more or less affected with weakness, disease, and irregular growth; causing curvatures or bends in different directions, and in different parts of the spine; more or less deranging the functions of the spinal marrow, and the nerves emanating from it.

Curvatures of the spine sometimes occasion considerable deformity, but as the different parts of the system generally accommodate themselves to the unnatural position into which they are gradually drawn, the consequences, as regards the health and longevity of the individual, are not often of a very serious nature.

Some of the most common causes of curvatures are a scrofulous habit of body, want of sufficient exercise, sitting or standing constantly in the same position, the want of pure air and nutritious food, and the debility consequent upon chronic disease.

The treatment of curvatures of the spine consists in the removal of those circumstances which have induced it, when known; a nutritious and well-regulated diet, wholesome air, and gymnastic exercises. In bad cases, beside a constant effort on the part of the individual, to correct the malposition of the body, the employment of some appropriate and well-adjusted mechanical apparatus may be resorted to.

The ligamentous and muscular structures of the spine are liable to the same diseases which affect these organs in other parts of the system; rheumatism is a disease which often affects these parts of the back, and common inflammation and abscesses are occasionally met with in this region, all of which require to be treated

by the same remedies that are employed for the cure of these maladies when occurring elsewhere.

SPINAL IRRITATION—Is an affection which may be considered rather as an effect or symptom of some other malady, than as a disease having a distinct existence in nature, and presenting specific characters. It may undoubtedly exist as a primary or idiopathic disease; but we are inclined to the opinion, however, that such cases are extremely infrequent, and that when it does occur, it is not an affection of very great importance, rarely, if ever, proving fatal, or causing diseases which are likely to abridge the term of life.

A diseased or irritated state of any of the organs of the body inflames or irritates the branches of the nerves distributed to these organs; and this condition of the nerves is transmitted to the main trunks as they emanate from the spine, and, perhaps, to the spinal cord itself. The spinal marrow becoming thus affected, the irritation, which may be considered as a low degree of inflammation, is communicated through other nerves to other organs, causing pain or derangement of function in the parts where the branches of these nerves are distributed. The pain and soreness felt when pressure is made upon the back is caused by the soreness around the roots of the nerves as they emanate from the spine.

The condition of the spinal marrow is supposed by the best authorities to be that of congestion, rather than irritation simply, as might be inferred from the name.

The symptoms of this affection are diversified in their character, and very numerous, a part of which only can be described, except by referring to the Protean phenomena of hysteria, neuralgia, and chronic rheumatism, by which a tolerably correct idea of their number and diversity can be formed. One of the most constant symptoms is pain and soreness in a greater or less degree, occasioned by making pressure upon the spinous processes of the vertebral column; this tenderness may be limited to a small spot, or be diffused over a considerable extent, and the nervous symptoms will be varied in their location and character, according to the part of the spine that is implicated in the disease.

When the irritation is confined to the neck and upper part of the back, loss of voice, neuralgic pains in the face and gums, confused sounds in the ears, perversion of taste and smell, paralysis of the tongue, loss of appetite, inordinate hunger or thirst, vomiting, difficult breathing, cough, irregularity of the pulse, syncope or fainting, paralysis of the arms or fingers, increased sensibility, or numbness in these parts, &c., are among the numerous symptoms which have been attributed to this cause.

When other parts of the spine are affected, the symptoms are similar in their general character, but vary somewhat in their particular phenomena, according to the functions of the organs thus affected.

In affections of the lower portions of the spine, pain in the walls of the abdomen, in the loins and urinary organs, an irritable state

of the womb, cramps, and increased sensibility or a partial paralysis of the inferior extremities, may occur. In those cases in which the irritation is more diffused, there may be hysterical symptoms, asthma, spasmodic croup, convulsions, epilepsy, spasmodic colic, diarrhœa, irritability of the bladder, and various other forms of neuralgia. It should be observed, that one only or several of these symptoms may exist at the same time, in any particular case, the amount of derangement depending upon the peculiar constitution or habit of the person, and the extent of the original lesion. Young girls are said to be more predisposed to this disease than married women, and women more than men. The age at which it is most frequent is between twenty and twenty-five, lessening in frequency according to the remoteness from this age either way. It has been particularly observed to be the most frequent in women between the ages of fifteen and forty-five, and may therefore be supposed to be more or less influenced by the menstrual function. A nervous temperament, and general irritability of the system, seem to predispose to it; but it may attack persons of every habit of body and constitution,—the full and plethoric, the spare and delicate.

The exciting causes most frequently producing spinal irritation are cold and moisture, uterine disorders, worms, dyspepsia, irritations in the stomach, bowels, and liver, erysipelas, rheumatism, eruptive diseases, fevers, local injuries, and powerful emotions of the mind.

It has been remarked, that there is no complaint to which the human frame is liable that may not occasionally be imitated in disturbed states of the spinal cord; it may, generally, however, be distinguished from organic diseases by the following diagnostic symptoms: "First, the peculiar pain or disturbance of any particular organ being altogether out of proportion to the constitutional symptoms; second, the complaints, whatever they may be, are usually relieved by the recumbent position; always increased by lifting weights, bending, stooping, or twisting the spine; and among the poorer classes, often consequent to the labor of carrying heavy loads; third, the existence of tenderness at that part of the spine which corresponds with the suffering organ; fourth, the disposition to a sudden transference of the diseased action from one organ or part to another, or the occurrence of hysterical symptoms in affections apparently acute."

The duration of the symptoms is unlimited, continuing from a single day to several years; but when uncomplicated with disorganizing disease of any important organ of the body, the prognosis is always favorable.

In the treatment of spinal irritation, the first step necessary is, if possible, to ascertain whether this affection is primary or secondary to some other disease, and whether acute or chronic in its character. In acute or recent attacks of primary irritation of the spinal cord, and when occurring in those individuals whose general health and constitutions are such as to warrant depletion,

bleeding by means of cups and leeches applied over the seat of the affection, followed by blisters, Croton oil, tartar emetic ointment, issues, or other counter-irritants, aided by mild cathartics, a low diet, and a recumbent position, will, perhaps, be found the most appropriate remedies.

When occurring as a secondary or sympathetic affection, the disease from whence it originates should be ascertained, and, if possible, removed. If derangement of the digestive or biliary organs, kidneys, or uterus, should be found to be the primary disease, as is undoubtedly the fact in a great proportion of cases, the treatment must be directed to the restoration of these organs to a healthy condition, at the same time that appropriate remedies should be employed for the removal of the spinal affection. In those cases of spinal irritation which are of a sub-acute or chronic character, and occurring in delicate and debilitated constitutions, bleeding to any considerable extent will be inadmissible; in these cases, tonics, stimulants, counter-irritants, and anodynes, are the class of remedies upon which the greatest reliance can be placed. As anodynes, the hyoscyamus, cicuta, belladonna, and lactucarium, are to be preferred, as opium and its preparations are often found to disagree with the subjects of this disease, and should be given with great caution. In chronic cases, the diet should be nutritious, light exercise should be freely taken in the open air, the society should be cheerful, and every available means should be used to restore the general health of the patient. In many respects, the treatment of this disease will require to be conducted upon the same principles which are laid down for the cure of chronic rheumatism, hysteria, and other neuralgic affections.

Spinal diseases, and particularly spinal irritation, have attracted much more attention within the last few years than formerly; and upon a full investigation of the subject, we are inclined to the opinion that much clearer views of the nature, and improvements in the treatment, of many anomalous affections of the nervous system, have resulted from the attention of the profession having been directed to this subject; but we think it very probable that, in many instances, too much stress has been laid upon the affection under consideration, and that patients have suffered much in the attempt to cure a malady, which, in their particular cases, existed only in their imaginations, or that of their medical adviser; the true primary disease being overlooked, while the most potent remedies were uselessly directed against a shadow.

SPINE, OR BACK-BONE.—It consists of twenty-four small bones, called vertebræ, of which, seven support the neck, twelve the back, and five the loins; these are called the true vertebræ. In addition, there are five false, which, in adults, are consolidated into one bone, called the os sacrum, and which fits in between the haunch-bones, forming a sort of keystone to the pelvis, and supporting the whole body.

The vertebræ are composed of a body and processes. The body, upon an average, is about one inch in thickness, convex

before, and concave behind, forming a part of the circle which encloses the spinal marrow. The processes, of which there are seven, extend in different directions from the back part of the body, and by union with each other complete the posterior portion of the circle. The processes are divided into four oblique,—two above and two below,—which serve as articulating surfaces to connect the vertebræ with each other; two transverse, which project on either side, allowing attachments to the muscles, and, in those which form the back, to the ribs; and one spinous process, which projects backwards, and forms the ridges in the middle of the back.

The vertebræ are firmly connected with each other by strong ligaments, and the canal formed by the bony circles of the different vertebræ is rendered perfect by a continuous ligament which lines it throughout.

On each side of this canal, through its whole extent, including the os sacrum, are holes or foramina occurring between each vertebræ, numbering in all thirty-two, which transmit as many pairs of nerves from the spinal marrow contained in the vertebral canal to every part of the body.

SPIRIT OF MINDERERUS—Acetate of Ammonia.—Take of carbonate of ammonia,—smelling salts,—any quantity, and pour upon it as much distilled vinegar, gradually, as will neutralize it. It can be made in a tumbler or a bottle. The vinegar unites with the carbonate, and sets free the carbonic acid, which flies off in a foam. It is best to take it in a state of effervescence, although it has about the same effect if kept in a bottle, and taken in spoonful doses. Lemon-juice or common vinegar may be used instead of distilled vinegar, which is not always readily obtained. Ten or fifteen grains of the carbonate may be mixed in a tumbler with a table-spoonful of lemon-juice or vinegar, and drank with the addition of a little water, or without it.

It is an excellent medicine to raise a sweat and to promote the flow of the urine. It moderates the circulation of the blood and lessens the heat of the body. In febrile diseases, it is a choice remedy. It is equally beneficial in the diseases of children as of grown people. The common doses of the acetate of ammonia are a table-spoonful for an adult, and a tea-spoonful for a child. Children are unable to take it in a state of effervescence. There is scarcely a remedy which we have used oftener than this, or with more satisfactory results.

SPIRIT OF SEA-SALT—Muriatic Acid—Marine Acid.—It is obtained from sea-salt by pouring upon it oil of vitriol,—sulphuric acid. The acid and salt are distilled in a retort, and the spirit of salt is liberated, and absorbed by water, when it becomes the muriatic acid sold in shops. This acid, when diluted with water, is a cooling tonic. In putrid diseases it is preferred to the elixir vitriol, or the nitric acid. The method of taking it is to add just enough of it to a tumbler of water to render it agreeably sour. Sugar is often added, to make the drink more pala-

table. It is often used as a gargle in the putrid sore throat,—scarlet fever. It is a valuable tonic, antiseptic, and refrigerant. The pure acid may also be used as a caustic. Fordyce recommends it as the best remedy we possess in jail and camp fevers, in malignant sore throat, small pox, and plague.

SPIRIT OF WINE—Alcohol.—This liquid is called either spirit or spirits of wine. It is obtained from wine and other fermented liquors by distillation. All intoxicating drinks contain more or less alcohol; it is this principle in liquors which produces intoxication. Pure alcohol is colorless, transparent, pungent to the taste, and fragrant. In medicine it is the great menstruum or solvent of vegetable, animal, and some mineral substances. It is a powerful and highly diffusible stimulant. In its effects it is the same thing as rum, which is alcohol diluted with water. The purest new rum will answer nearly as well for a solvent or menstruum as alcohol. As a topical application, in cases of inflammation, cramps, pains, and fevers, alcohol is a most valuable remedy. It is not taken internally in its pure state. In rheumatic inflammations, both acute and chronic, hot spirits of wine applied to the part is an excellent remedy. In inflammation of the uterus, breasts, and bowels, hot applications of alcohol are among the best means of cure.

SPLEEN—Milt.—The spleen is contained in the cavity of the belly, and lies on the left side of the spine behind the bowels. It is contiguous to the stomach, the colon, and the pancreas. It is about four inches and a half long, and from two to three wide. The color of it is purple, and its texture porous and spongy. Its ordinary or average weight is about eight ounces, although it is very often much larger, even when not diseased. It is much more variable in magnitude than any other organ of the body. It often becomes enlarged by disease to nearly the size of the liver. Towards the ribs, the spleen is convex, and in a slight degree concave on the other side. It is supplied with blood from the cœliac artery, a branch of which goes to the spleen. This artery is of a remarkably large size in proportion to the size of the organ which it supplies with blood. The veins which return the splenic blood are also proportionably large. The spleen has no excretory duct, and secretes no peculiar fluid. A large quantity of arterial blood goes to it, and as large an amount of purple blood is returned from it. It has lymphatic vessels like most other organs, but no unusual amount or quality of lymph appears to be secreted. The venous blood is conveyed into the vena portarum by a vein which has no valves.

The office of the spleen can only be inferred from its structure and vessels. The splenic artery conveys a larger amount of blood than is necessary for the support of the organ. *The office, therefore, of the spleen obviously is, the secretion of purple or venous blood.*

That the purple or venous blood is a genuine secretion from the red. arterial blood, is capable of demonstration, and ought to be

considered, like the other secretions, a distinct fluid. Secretion is the only operation known in the human system, by which one fluid can be converted into another of different properties. The necessity of an organ for the special secretion of venous blood may not be apparent, but the fact is quite unquestionable. The necessity of the menstrual secretion, and even its use, are not apparent, but the fact is unquestionable. The quantity of blood which the spleen is capable of transferring from the arterial to the venous vessels, or of transforming from arterial into venous blood, in a short time, must render it capable of exerting an extraordinary influence upon the circulation, even in its natural and healthy state. Still more extraordinary effects, then, must it produce in the enlarged state to which it is subject. Fainting, palpitations, fits, and strange nervous feelings, may be expected to follow. If a quantity of blood is suddenly removed from the arteries to the veins, the same or similar effects will probably follow as if the same amount of blood were entirely removed from the system. The sensations, and the passions and emotions of the mind, doubtless, have as great influence upon the function of the spleen as upon the stomach and other organs. In a diseased state, therefore, when its vessels are unusually enlarged, the circulation must be often and greatly disturbed.

In a healthy state, the spleen may perform the office of a safety-valve. In cases of inflammation and congestion, where the organs become engorged and over-loaded, it may afford an easy outlet for the arterial, inflammatory blood. The fainting which often takes place in the commencement of fevers, inflammations, and other diseases, may arise from the action of the spleen, excited by the painful sensations. The circulation of the blood, in people who are called spleeny, is evidently very often and very much disturbed. The color in such people is subject to great and sudden changes, and the heart to palpitation on the slightest occasions. They faint easily and are easily put out of breath.

SPLENITIS—Inflammation of the Spleen.—See *Inflammation of the Spleen*.

SPRAINS.—A sprain is a subluxation of a joint, by which the tendons and ligaments receive a sudden stretch, and are sometimes torn. It is commonly produced by falling, slipping, running, jumping, or wrestling.

A sprain is sometimes longer in getting well, and more painful, than a dislocation, owing to the greater mischief which is done to the cords and ligaments. In some people, it is probable that the tendons and ligaments are more yielding and elastic than in others; in consequence of which, one person will have a complete dislocation where another will have only a sprain, but the sprain may be the worst injury.

A sprain is attended with pain and swelling of the injured part, and sometimes discoloration. If any of the blood-vessels have been ruptured, the wounded part immediately becomes of a purple

color. If only the lymphatics are lacerated, the swelling will be white.

The first thing to be done in a sprain; which commonly takes place in the wrists, ankles or knees, is to administer a dose of laudanum or morphine, in proportion to the degree of pain. The wrist, ankle, knee, or other joint, should be wet with the same, and then covered with a soft, warm rye-meal, flax-seed, or white-bread poultice, and renewed as often as it grows hard. If laudanum or morphine is not handy, new rum or vinegar may be used for a wash. Cold applications, in the first instance, before any inflammation has come on, and the vitality of the part returns, appear to us improper and injurious. If the joint becomes hot, dry, and sore, leeches should be applied until the inflammation is reduced. Lead-water and a solution of white vitriol should be applied after the leeches are removed. The limb should be kept at rest, a dose of salts or some other physic taken, and the diet should be light. In old sprains, the opodeldoc mixed with laudanum is an excellent medicine. The volatile liniment mixed with laudanum is another external application of equal efficacy. Vinegar and new rum mixed, and applied warm, or hot, has been found extremely good. In cold weather, the sprained joint should be covered with flannel and kept comfortably warm. The great object is to prevent inflammation and to reëstablish the circulation of the part.

SPURRED RYE—*Ergot*.—See *Ergot*.

SQUILL—*Scilla Maritima*—Sea-onions.—The squill is the root of a plant which grows upon the shores of the Spanish peninsula. It is bitter, nauseous, and acrid. The squill is a powerful stimulant, diuretic, emetic, expectorant, and sudorific. The dose of squill is one or two grains. The way in which it is commonly used is in the form of a syrup, which is made by adding three parts of the vinegar of squill to two parts of simple syrup. The dose of the syrup of squill is from one to two teaspoonfuls. A child from one to three years old may take a teaspoonful.

In cases of coughs, lung fever, influenza, peripneumony, and consumption, the squill is a most effectual remedy. It is safe and innocent. Its efficacy in the cure of dropsy is hardly surpassed by that of any other medicine. It promotes the secretion of the urine, at the same time that it opens the pores of the skin, and relaxes the mucous membrane of the lungs. It may be used in combination with sweet spirits of nitre, lobelia, antimony, calomel, copaiva, and several other medicines.

SQUINTING—*Strabismus*.—When a person is cross-eyed the defect is sometimes in the muscles of one eye, and sometimes in both. It has been supposed that squinting or cross-eyes were owing to some defect in the sight or vision. But it is no doubt, in many instances, caused by the involuntary contraction or shortening of the muscles which move the eyeball. When the muscles on one side of the eyeball become shorter than those of

the other, the ball must turn in the direction of the shorter muscles. In some rare cases the ball will turn out, but in most cases the obliquity is towards the nose, or one eye is turned towards the other. If a child is born with an obliquity of one or both eyes, there is no way to correct it but by an operation; and even where it appears to be acquired, we imagine it very rare that anything can be done to obviate the habit.

Very fortunately for this class of people, a remedy has of late been discovered. The operation is trifling, but it is one of the greatest improvements of the age, and does honor to the discoverer. It consists in taking hold of the shortened muscle which causes the obliquity, with a small sharp hook, called a *tanaculum*, and cutting it off with a pair of sharp-pointed scissors. As soon as the muscle is entirely severed or dissected off, the ball of the eye, or rather its axis, becomes straight. Nothing more is necessary than to cover the eye with a handkerchief or bandage until the incision heals up. If the shortened muscle has been entirely cut off, the axis of the eye will ever after remain straight. It is sometimes necessary to perform the operation upon both eyes, as both are oblique.

STAMMERING.—This affection of the voice proceeds from some weakness in the muscles engaged in the faculty of speech. Bashfulness and timidity increase the difficulty very much, for when the stammerer is speaking to his familiar friends and acquaintances, he talks with a much better grace. The difficulty appears to be owing to a partial paralysis of the vocal muscles, which can only be surmounted by care and attention in the pronunciation of single words and short sentences. By constantly reading aloud and speaking pieces of his own composition, the stammerer may always overcome the impediment. Women are much less liable to stammer than men, because they feel the mortification of the disagreeable habit much keener, and make greater efforts to conquer it. Singing and reading poetry are a great help in the conquest of the habit. There are always some words upon which the stammerer is more likely to blunder than others. These words should be remembered, and pronounced over slowly, until they can be spoken without impediment. The words *yes* and *no*, for instance, should be spoken until a habit is acquired of pronouncing them without hesitation. The habit of repeating dialogues will very soon cure the awkwardness of pronunciation. But if this lameness of the vocal organs is suffered to go uncorrected until manhood, it will be found very difficult to remedy it. Since it is well known that the impediment may be surmounted, no one should allow so embarrassing and awkward a habit to get the better of him. An operation is sometimes performed by dividing a muscle under the tongue.

ST. ANTHONY'S FIRE—*Erysipelas*.—Almost everybody must have observed as many as four different kinds of inflammation. The first and most common kind is where the part swells, grows red and painful, and maturates, or comes to a head and

discharges matter. The second is red, but never swells much, and ends in ulceration or an eating sore. The third kind of inflammation consists of pustules, pimples, and red spots, as in the small pox, tetter, and measles. The fourth kind is spreading, and runs to a blister or vesication. This last is the St. Anthony's fire.

The St. Anthony's fire probably received its name from the burning sensation which often attends it, and the disposition of the disease to spread like the flames of fire. In no disease does a redness of the skin appear to kindle up and to spread so fast and wide as in this. In the course of a few hours, the legs and arms will often be covered with little blushes, varying in size from that of a ninepence to that of a silver dollar; and, in the worst kind of the disease, these blushes will cover a space as large as the two hands, or larger.

The St. Anthony's fire is a diffuse inflammation of the skin and flesh, which appears for the most part upon the head, face, neck, and chest, but sometimes extends by degrees over the whole surface of the body. It commences with a fever, and about the third day the cutaneous inflammation appears. There is always more or less tumefaction of the skin and flesh, and the disease is attended with sleepiness, and often delirium. Sometimes the inflammation is confined to a particular part, as to the face, or to one leg; and at other times, it will travel over the whole surface, dying away in one part, and then kindling up in another.

The inflammation differs amazingly as to the depth to which it extends, and the extent of surface which it will occupy. When the face, for instance, is the seat of the disease, it will sometimes occupy one side of it, and at others, both. In some instances, it will appear to be merely the skin which is affected, and in others, the whole flesh of the face will become thickened and caked. The eyelids will be enormously thickened and swelled, and the whole face and head tumefied to twice their ordinary size.

The erysipelas, or St. Anthony's fire, comes on with chills and fever, pains in the head, back, and limbs, and more or less heat and dryness of the skin. About the third day, or the second night, the tumefaction of the part commences. The swelled skin and flesh soon become of a dark-red color, smooth and soft, and attended with a sensation of burning and tingling. The eyelids will sometimes look like bladders of water, so large and heavy as to close the eyes. The inflamed integuments are not extremely sore to the touch, but will bear to be pressed without much pain, and when so pressed the redness disappears, but the color returns when the pressure is removed.

On the fourth or fifth day minute blisters arise in different places, but especially about the centre of the inflammation, or spot which is of the deepest red. The fever all the while keeps on increasing. The blisters or vesications are filled with a transparent, watery fluid, which accumulates until it breaks the skin, and then runs out. By the eighth or ninth day, the disease comes to its height, and the blistered parts begin to dry and scale off.

The fever now subsides, and recovery commences. There will often, however, be a relapse of two or three days' duration, when a complete recovery takes place. It sometimes ends fatally, but we believe it is very rarely, except where it prevails as a malignant epidemic, and when it follows large wounds and surgical operations.

The St. Anthony's fire, or erysipelas, sometimes prevails as an epidemic, of which we have seen several instances. At these times the disease has been much more severe than at others. In scattering cases, the disease is usually light, and commonly of the erratic or running kind, confined for the most part to the skin. In this kind of the disease, the blisters are smaller and more numerous, commencing commonly in the face, and extending successively to the contiguous parts. In some cases, the private parts will be very much swelled. In the worst cases, the disease runs into gangrene or mortification.

The erysipelas is for the most part confined to women, children, and intemperate men. It rarely attacks robust and full-blooded men.

The disease is induced by particular conditions of the atmosphere, by intemperance, want of good, wholesome food, exposure to cold, and a sudden check of the perspiration.

Domestic Remedies.—The best medicines in this disease are the cream of tartar and the sal nitre; and in malignant cases, the quinine. The best external application is alcohol. In the commencement of the disease, a table-spoonful of the cream of tartar should be given, to operate upon the bowels, and if one spoonful does not produce the effect, another should be given. After the bowels have been unloaded, eight grains of the sal nitre should be given, and repeated every three hours, if the fever is severe. Where the fever is typhoid and the inflammation deep, the quinine, in the dose of a grain, should be given once in four hours. The acetate of ammonia, or lemon-juice and the salts of hartshorn, is one of the most cooling drinks which can be given. The common drink should be cold water or barberry-water. The food, the same as in any other fever; water porridge, bread-water, or bread soaked in molasses and water. If balm-tea is preferred, or China tea, either may be drank, instead of water. Tea is an antidote to drowsiness, and in this disease seems to be very appropriate. Green tea has the most effect in preventing lethargy or sleepiness.

A tea made of the buckwheat meal is a good wash for the inflamed skin and flesh; and when the blisters have burst, the dry meal itself may be strewed upon them. But we believe that alcohol, in some form or other, will be found the most efficacious external wash. Dr. Fordyce says, that alcohol applied to the inflamed surface will cure the disease. New rum is the most common form in which alcohol is used. The inflamed parts should be kept wet with it continually. When the face is much inflamed and tumefied, it will sometimes be advisable to make use of soft

bread poultices applied cold, and of the solution of lead or white vitriol. "Tepid water, or weak alcohol and water, may be constantly applied to cool the inflammation, to wash away the matter discharged from the minute vesicles which are constantly bursting, and prevent the disease from spreading. Flour and other farinaceous substances are beneficial, by absorbing the watery matter and protecting the diseased surface from the air, and by some are preferred to liquid applications." We have less fears than many people of driving the inflammation in, as it is called. We have no idea that inflammatory diseases are driven about the system, first in, and then out, as was the belief of our theoretical fathers. We believe, as a general rule, it is best to attack diseases where we find them, without any reference to the changes which they have been conjectured sometimes to have made.

Professional Remedies.—In the light kind of this disease, where it is only confined to red spots on the skin, a gentle emetic of ipecac., a dose of salts, and a drink of lemonade, will be all the medicine necessary.

In the severe kind, where the fever is inflammatory or typhoid, as has often been the case of late years in this vicinity, it will be necessary to employ more active means. In almost all severe cases, the inflammation attacks the face and head, and if the swelling is considerable, the color of a dark-red, and the fever high, one bleeding may be employed either from the arm or by the use of a dozen leeches. One grain of tartar emetic may be given in solution, to operate upon the stomach and bowels, and repeated as the occasion may require. After it, six or eight grains of the antimonial powder may be given every two hours. The acetate of ammonia may be applied as a wash, and acid drinks given to allay the thirst. Sudorifics are thought by Sir Astley Cooper to be among the best remedies. Painting over the inflamed surface with tincture of iodine is much practised by some, and is a remedy deserving some credit. Nitrate of silver and blisters are also used to prevent the spreading of the inflammation.

The worst kind of the disease is the malignant or gangrenous, where the inflammation assumes a livid hue; and if vesication has commenced, a crepitus or rattling of the air is perceived under the cuticle. The only way to combat such cases is to give wine, quinine, elixir vitriol, ammonia, and other stimulants and tonics.

STAR GRASS—*Aletris Farinosa*.—This is a native plant, found in woods and pastures, growing to sixteen or eighteen inches in height. The spear-shaped leaves spread out into the form of a star. The root is a popular medicine for weak stomachs. It is good for a loss of appetite and dyspepsia, and some have esteemed it as a remedy in dropsy. The root may be given in powder, or it may be boiled in water, and taken as freely as catmint tea.

STERNUM.—The breast-bone.

STIMULANT.—Medicines which excite the activity of the

body and mind. Alcohol, wine, camphor, heat, light, mustard, peppermint, cinnamon, and ginger, are examples of stimulating agents. Everything which exalts the heat of the body, or the part to which it is applied, and quickens the circulation of the blood, is a stimulant.

STOMACH.—The stomach is situated in the cavity of the belly, in its upper part, and in the left side, opposite the liver. It is a portion of the alimentary canal between the meatpipe and the duodenum. In its shape, it somewhat resembles a bagpipe, oblong and round. As the stomach terminates in the pylorus or its lower orifice, it becomes smaller. It is composed of three coats, an outermost or peritoneal coat, a muscular or middle coat, and a villous or shaggy coat. The stomach secretes a mucus, and a peculiar liquid or juice, which is called the gastric juice. This juice is secreted in large quantities, and dissolves the food as it passes into the stomach. Digestion seems to consist in the action of the gastric juice upon the food. It is a truly astonishing menstruum or solvent, although out of the stomach it is comparatively inert. It acts upon solid substances in the stomach by a kind of corrosion, until they are entirely consumed, or converted into a pulaceous mass. The stomach is bountifully supplied with nerves and mucous glands.

STRABISMUS—Squinting. — See *Squinting*.

STRANGULATED HERNIA.—See *Rupture*.

STRANGLING OR CHOKING.—People often choke to death for want of very little assistance, or knowledge. When a piece of meat, bread, or any other substance, gets into the throat without the ability to swallow it, the first thing to be done is to run the fingers into the mouth and pull it out. In most cases, especially in young children, the irritation of the finger excites an act of vomiting which throws the substance from the throat.

Small, smooth substances sometimes enter the windpipe, or go down the wrong way. In this case an act of coughing should be excited, or an expulsion of the air from the lungs effected. Striking with the flat hand upon the back, between the shoulders, has this effect in some measure; but, if adroitly done, a sudden pressure made upon the abdomen or belly in an upward direction has this effect in a much greater degree. Hartshorn held to the nose, or a little bayberry snuff, will sometimes excite coughing. A little sulphur or a match burned will be pretty sure to excite coughing, if any air can enter the windpipe. Sneezing will have nearly the same effect as coughing. The chloride of soda or lime, or burned feathers, will excite coughing. Vomiting has some effect even to expel substances from the windpipe; and for this purpose, the finger should be run into the throat, or the fauces, or the palate tickled with a feather. This operation can almost always be effected by means of the finger.

The crust of bread, chewed and swallowed, will sometimes carry down substances lodged in the meatpipe.

Adults should always have presence of mind and recollection

enough, if they retain their senses, to attempt to cough of themselves, without trying to draw in the breath.

Where small bones or other small substances lodge in the meat-pipe, an emetic of ipecac., or some other kind, can be swallowed, and the offending matter thrown up.

Substances can sometimes be taken out of the throat with a pair of sugar-tongs, a spoon, or a pair of blunt scissors, where a pair of forceps cannot be obtained.

If the substance fills the meatpipe so that swallowing is prevented, it must be pushed down with a gum catheter, or a probang; but great caution must be used in this operation, lest the pipe be torn, and more mischief done than good.

In cases where the windpipe is nearly or completely stopped, and the face turns purple from suffocation, after other means have been tried, tracheotomy should be performed, and the substance extracted, or the air let in through an artificial opening. But it must not be forgotten, that, in all cases where vomiting can be excited, it ought to be done, as it relaxes the passage, and is the most effectual means of removing the cause of the strangulation. Bleeding will in some instances relax the pipes and relieve the breathing.

STRANGURY.—A suppression of urine. See *Dysury*.

STRYCHNINE—Strychnia.—This is an alkaline substance, obtained by a chemical process from *nux vomica*. It is a white powder, but consists of small crystals. It has an extremely bitter taste, but no smell. It is unalterable by the action of the atmosphere, and but slightly soluble in water. With the acids it forms salts, which still retain the bitterness of the strychnine. In the volatile oils, such as cinnamon and peppermint, it dissolves very readily, but in alcohol only in a partial degree. Next to the prussic acid, the strychnine is probably the quickest and strongest poison. An eighth of a grain is sufficient to kill a dog.

The dose is from one sixteenth to an eighth of a grain in the cure of diseases. It may be given in pill, or dissolved in water to which a little acetic acid has been added. The acid converts it into a salt. The strychnine is used in palsy, tic douloureux, suppression of the menses, St. Vitus' dance, and some other diseases.

It has been used with success, applied to the raw surface of a blister, by which it is absorbed into the system. The quarter of a grain may be sprinkled upon the denuded surface twice a day.

STUPOR—Insensibility.—See *Lethargy*.

ST. VITUS' DANCE—Chorea.—This disease appears to affect chiefly the motion of the muscles and limbs. It approaches in a measure to the nature of hysterics and falling fits, but is much less severe than either. Such is the disposition to motion, that it is difficult to keep the affected limbs still, even when the body is at rest. The arms and legs make a kind of dancing motion when an effort is made to walk or handle anything. The motion appears about half way between a convulsive and a voluntary motion. It

most resembles the shaking palsy in old people of any affection we know of. In some instances, it affects only one side of the body, and in others all the muscles and limbs. In this disease, the will is either not directed to the right muscles to be moved, or the muscles are partially paralyzed. In raising a cup or tumbler to the mouth, a person affected with the St. Vitus' dance will put it in all manner of directions before it can be brought to the lips. In attempting to walk, the same variety of movements is made by the legs, before a proper step can be taken. It will appear every moment as if the person were going to fall, such is the reeling and dancing of the body. The hands and arms experience the same awkward movements, before anything can be laid hold of. The movements of the limbs are executed with much more difficulty in the presence of strangers and curious observers than at other times.

To what this disobedience of the muscles to the will is owing, seems difficult to discern. It is probable, however, that the nerves of motion are partially paralyzed. The motions of the limbs can be executed much better to the sound of music than in any other way. This effect is probably owing to the temporary excitement which is created by the influence of the music. These people will often appear as if executing some kind of strange fantastic dance. Various grimaces and gestures will be made, as if done to excite merriment, but the whole is unavoidable.

A degree of idiocy is sometimes the effect of the disease, but, in most instances, the mind remains unaffected. The speech is often impaired, and the pronunciation difficult.

The causes of the disease are supposed to be the effects of cold from being badly clothed; the want of proper nursing and of nourishing food; too great confinement to the house or workshop; bad air, and the want of cleanliness. The disease is principally confined to children, and youth between the ages of eight and fourteen years. Some cases happen after puberty or manhood, but these are rare. Both sexes are alike subject to it.

The best method of cure is to place the child or youth in the country, if he does not live there, and to allow him the freedom of the fields and the woods. If some light employment can be found for him, so much the better. The sea-shore is the most favorable place, if such a country town can be found. In addition to a favorable situation and sufficient exercise in the open air, the diet is of the most essential importance. This should consist mainly of milk, salted meats and fish, and wholesome, dry vegetables. Rye bread is a good article of food; it opens the bowels, and sets well upon the stomach.

Purgatives have more effect in this disease than any other medicines. The bowels, in severe cases, should be drained every day, for a fortnight or three weeks in succession. For this purpose, pills made of equal parts of aloes and the oxide of bismuth will be found well calculated to succeed. One, two, or three of them may be given, every night, as the case may require. The quinine, in

the dose of a grain every morning, may be given at the same time. Any kind of purgative, or any kind of tonic, will answer, but we have named the two most useful.

Valerian is an excellent anodyne. The poppy tea, if drank plentifully and strong, will have no inconsiderable effect in bracing the nerves. In some cases, where the motions are very convulsive, attended with an irritability of the nervous system, laudanum or morphine will be found serviceable. Ten drops may be given to a child of eight years old, and one drop added for every year after it, until the fifteenth year. *Cicuta* and the belladonna have, in some instances, been found effectual. The elixir *pro.* is a good medicine in this disease, given in the dose of a tea-spoonful every morning, especially where the child is affected with pin-worms. Castor, camphor, assafetida and musk, are all worthy of trial. Electricity, or galvanism, if properly and perseveringly used, has cured very many. It should always be applied until a moisture is produced upon the skin. Warm bathing, interspersed with now and then a cold bath, will have a very salutary effect. A course of the mineral spring water, both saline and chalybeate, should be tried where more domestic means fail. But the greatest benefit is derivable from the sea air, the freedom of a country life, wholesome food, constant exercise, and a clean, well-rubbed skin.

STYPTIC POWDER.—This is a powder to stop bleedings, both externally and internally. It is made by rubbing together, very finely, in a mortar, four parts of alum and one of kino. It may be snuffed up the nose in case of bleeding, or used on a pledget of lint. It may be put into a bleeding tooth, or strewed upon any bleeding cut or wound. It is a powerful astringent, and soon contracts the bleeding vessels.

In bleedings from the womb, stomach, bowels, lungs, and kidneys, it may be taken internally, in doses of ten or fifteen grains, in molasses or water. In cases of an excessive flow of the menses, a powder taken every two or three hours, conjoined with complete rest and cooling drinks, will often succeed in arresting the discharge.

SUCCINIC ACID—Salt of Amber.—This acid or salt is made by distilling equal parts of powdered amber and pure sand in a glass retort. The oil of amber and the salt are formed at the same time, and by the same process. The salt is collected from the neck of the retort and the sides of the receiver, pressed between folds of blotting paper, purified by solution in warm water, and the solution evaporated, when crystallization takes place. The acid or salt has a penetrating, sub-astringent taste. It dissolves in water and alcohol, and with the alkalis forms neutral salts. It is a laxative, diuretic, and antispasmodic. Formerly it was much in use, but of late it has been quite forgotten.

The oil of amber is a medicine sometimes used externally in cases of chronic rheumatism, white swellings, and spasms.

SUGAR OF LEAD—Acetate of Lead—*Acetis Plumbi*.—This is a crystalline, metallic salt. It is the combination of distilled vin-

egar with white lead, in the proportion of ten parts of the vinegar to one of the lead.

It dissolves readily either in hot or cold water. It is a powerful styptic and discutient. It is given internally to stop hemorrhages from the stomach, bowels, womb, and lungs. The dose is from one to three grains, repeated every hour. Its principal use, however, is as an external application or wash to inflammations upon the surface, to the eyes, and wherever there is local irritation, heat, redness, swelling, and pain. There is nothing which will lessen heat in a greater degree, and with more certainty, than the sugar of lead in solution, properly applied.

As a wash it is used in solution. A drachm, or the eighth part of an ounce, dissolved in half a pint of water, forms a wash of moderate strength, although more or less may be used, as the case requires. It is a healing wash for old ulcers, as well as for sore eyes. In the gonorrhœa, it is often used by way of injection into the urethra.

Sugar of lead is a powerful astringent, and is employed in obstinate cases of dysentery and diarrhœa.

SUICIDE.—This unnatural act is, in almost all cases, the result of disease. The love of life is one of the deepest instincts of man, and nothing but disease, or an escape from a worse or more ignominious death than suicide, can extinguish it. Disease subverts every propensity, passion, and action of the body and mind; destroys the taste for the most savory food; turns to disgust the loveliest objects, and weans us from the dearest connections in life. All those ties which bind us to life, and the inestimable value which we place upon the world and its pleasures, may be dissolved and lost, by a burning fever, or a painful sore, of only a few weeks' continuance.

The affections and diseases of the brain and nerves are more intolerable than those of the other organs. When the seat of thought and feeling becomes the seat of pain and disease, we may well imagine a greater intolerance of distress. As the eye becomes intolerant of light, so does the mind, in some instances, become intolerant of its own operations.

We believe, however, that people do not so often take their lives to relieve themselves of distress of which they are sensible and cannot bear, as from false apprehensions of more horrid death, of disgrace, or some evil which is magnified by a diseased condition of the seat of thought and feeling. We once attended a deranged person who had become persuaded that she should live on earth forever. This idea, agreeable enough to most people, was to her the source of the greatest misery and torment. The most agreeable ideas to a person in health, may become the most painful and disagreeable in a disorder of the brain and nerves. A person may be deranged in consequence of disappointed love, and the object of the passion instantly turned to disgust by the disorder which is the consequence of it. Another person whom we knew plunged out of a window where he stood a thousand chances of being killed,

to escape from the hands of two or three doctors, whom he imagined to have come to dissect him, but who had only come to consult upon his case. The history of those people who have attempted to commit suicide, but have been prevented by some accident, or by some precaution on the part of others, shows pretty conclusively that suicide is, in most instances, the result of false impressions. Few commit the act in a sound state of the mind. The best of people are as liable to commit it as others, and the records of mortality will show that the deed has been as often done by the good and virtuous as by the bad.

In former times the deed was followed by the most direful ignominy; the property of the *suicide* was confiscated, and his body buried in the fork of the road. This relic of superstition is fast fading away, and the subject has come to be viewed in a more rational light. Men have died in this way from the foundation of the world, and always will to the end of time. As long as the mind is susceptible of disease and of false impressions, the unnatural act will be committed. It appears to be one of the manifold ways in which human life is terminated, and where it is the result of disease, it is, like death in any other way, deplorable, but inevitable. No dishonor can rationally appertain to such a death, any more than to a death occasioned by a fit of the palsy or of apoplexy, or by any other disease.

There is one fact connected with this subject well worthy of remembrance and attention. That is, that the propensity to commit suicide is, for the most part, transitory, and if the false impression or suicidal paroxysm can be counteracted or suspended for a while, the act may not only be prevented, but the propensity cured. Thousands have made the attempt at one time, who have shuddered at the thought a few days or a few weeks after. Suicide appears to result from a peculiar condition of the mind, in the same way that all other insane acts arise. Some insane people will inflict wounds upon themselves; others will mutilate themselves; some will eat nothing; others will drink nothing; some are full of fear and apprehension; others full of courage and confidence; and some will destroy themselves by starvation, who would tremble at the idea of being hung or shot.

Probably many sane people would destroy themselves if they believed for a certainty that they were to be put to death by an enemy. Insane people, under the full belief, induced by disease, that they are to suffer immeasurably in some way or other, act in the same way. In the former case the impression is true; in the latter it is false. But to the mind they are equally true, and the impulse which springs from both is the same. Brutus fell upon his sword to avoid an ignominious death. Insanity places many thousands in the same condition with Brutus.

SULPHATE OF COPPER—Blue Vitriol.—See *Blue Vitriol*.

SULPHATE OF IRON—Green Vitriol.—It is formed by dissolving iron filings in oil of vitriol in a warm sand bath, evaporating the solution to a certain degree, and allowing it to crystal-

lize. It consists of green crystals, semi-transparent, and soluble in water. It is styptic, astringent, and tonic. It may be taken in the form of a pill or in solution. The medium dose is from three to five grains. In chlorosis or green sickness, it is accounted one of the best remedies. It is often used in the form of Griffith's mixture. The sulphate of iron is a valuable medicine in debility of the stomach and bowels. It is, next to the carbonate or rust of iron, one of its best preparations.

SULPHATES.—Salts formed by the union of oil of vitriol, — sulphuric acid, — with alkalies, metals, and earths. Soda, dissolved in oil of vitriol, forms Glauber's salts; the earth called alumine, — pure clay, — dissolved in the same, forms alum; iron, dissolved in this acid, forms green vitriol, or green sulphate of iron. Many of the sulphates are found native in the earth, and others formed artificially.

SULPHUR—Brimstone—Flowers of Sulphur.—This article is commonly seen either in the form of roll brimstone, or the flowers of brimstone. It is found in the earth, nearly pure, as well as in combination with metals. It abounds in volcanic countries. It is very inflammable, and burns with a blue flame. It is of a light-yellow color, and has a faint smell. The white smoke, which is formed in burning it, is the oil of vitriol in a state of gas, which, when absorbed by water, forms the real acid.

The flowers of sulphur are the roll brimstone, sublimated.

Sulphur combines with the earths, metals, and alkalies, and forms sulphurets.

Sulphur loosens the bowels and increases the insensible perspiration. It seems to permeate every part of the body, and even escapes by the skin. Dissolved in water, or made into an ointment, it is an excellent cure for diseases of the skin. The itch is speedily removed by it, and other eruptions and skin diseases often cured. In the form of a bath, it is much used for the cure of chronic rheumatism, white swellings, and obstinate diseases of the joints, as well as for diseases of the skin. It is found useful in a great variety of humors, taken internally, in the dose of one, two, or three tea-spoonfuls, mixed with molasses or syrup.

Sulphur has been much celebrated for the cure of coughs, asthma, and catarrh. It is a safe, gentle laxative, very suitable in case of the piles and costiveness.

SULPHURET OF ANTIMONY—*Sulphuretum Antimonii*.—This substance is the native ore of antimony. The pure metal of antimony is obtained from it by fusion or melting. The sulphuret is of a grayish-blue color, has a bright, shining surface, and striated texture. The pure metal is of a silvery-white color, very brittle, easily melted, and contracts a rust when moderately heated.

The rust or oxide of antimony combines with a large number of the acids and forms neutral salts, such as tartrate of antimony, and others.

The sulphuret is a potent emetic and cathartic. In minute doses it is a perspirative. It is now not in much use, having given place

to the tartrate, and pulvis antimonialis. All the preparations of antimony excite vomiting, purging and sweating. They are much used in fevers and inflammatory diseases. They lessen the heat, moderate the pulse, and, in many instances, put an end to the disease. Domestic animals are much benefited by taking sulphuret of antimony. It is said that a lean, unhealthy horse will become fat by taking a drachm of the powder, every morning, for two months together. It is considered a great purifier of the blood.

SULPHURIC ACID—Oil of Vitriol.—See *Oil of Vitriol*.

SUMACH—*Rhus Glabrum*.—Of this plant there are two kinds, the narrow-leaved and the Pennsylvanian sumach. The berries of both are acid and astringent. The leaves are used in tanning and making ink. A tea made of the berries and sweetened with honey is good for canker in the mouth. It is also used as a gargle, in putrid fevers, to remove the thrush and sordes from the mouth and teeth. It is useful, in bowel complaints and diabetes, as a drink.

SUPER TARTRATE OF POTASH—Cream of Tartar.—See *Cream of Tartar*.

SUPPRESSION OF THE MENSES—Chlorosis—Green Sickness.—See *Green Sickness* and *Monthly Sickness*.

SUPPURATION.—The formation of matter or pus in inflammatory swellings. After suppuration commences, the pain commonly lessens until it finally ceases, which announces the completion of the maturation.

SURGERY.—That department of the medical art that relates to the performances of operations for the removal of diseased parts. Local diseases often proceed from general causes, and the general system is frequently diseased by local causes; it is therefore essential that the surgeon should have a thorough knowledge of the science of medicine, as well as of anatomy, to enable him to practise the art successfully. Wounds received by accident, tumors, abscesses, ulcers, mortifications, fractures, and dislocations of the bones, cancers, diseases of the eye and ear, ruptures, and stone in the bladder, are some of the cases which most strictly belong to the surgical department. Surgical diseases are produced by, or are very much influenced by, inflammation, irritation, suppuration, ulceration, gangrene, and granulation, each of which subjects require to be well understood by the practical surgeon.

SUTURE.—Uniting the lips of a wound by sewing. This is sometimes done by pins, where the wound is deep and large. A pin is run through the edges of the wound, when the lips are brought in contact, and a waxed thread is twisted around the pin in the form of the figure 8. The pin acts the part of a skewer. A second and a third pin are passed through the lips of the wound at convenient distances, in the same way, and a ligature twisted around the ends of them, which project on each side of the cut. In this way the incision or wound is perfectly secured. The distance between the pins should not be more than a half or three

quarters of an inch, and the number of them determined by the length of the wound.

SWELLED LEG—*Phlegmasia Lactea*.—This disease is sometimes called the milk leg or the puerperal swelled leg. It appears to be occasioned by the pressure upon the veins and arteries made by the increased size and weight of the womb during pregnancy. The blood-vessels of the legs, in the last months of child-bearing, being heavily pressed upon above, and the blood in them prevented from returning with its accustomed freedom, are continually distended and strained to an unnatural degree. After child-birth the condition of the whole system is changed. The loss of blood and of strength changes the tone of the whole system, and the powers of life are doubtless very much lowered, in consequence of which, the injured vessels inflame and swell.

This affection of the leg usually comes on very suddenly in the course of the second week of confinement. The secretion of milk is almost always suspended, which has been thought by some to be the cause of the disease, and hence the name of milk leg. In one or two days from the commencement of the disease, a slight pain and soreness are felt in the groin, and the leg will often be found swelled to twice its usual size. The limb will be hot, exquisitely tender, very heavy and cumbersome. From the glands in the groins, the swelling and soreness extend to the private parts, and down the whole length of the limb. Instead of being red, like other inflammations, the leg is white, glossy, hard, smooth, and even, upon the surface. The lymphatic glands, situate in the groin and fleshy part of the limb, feel swelled, hard, and knotty. The pain soon becomes severe, and, in some instances, is intolerable without the use of opiates. When the limb has become swelled to its full extent, the pain, in a measure, ceases. The skin of the leg is whiter than natural, exceedingly tense, and the heat is that of a fever. If the swelled leg is pressed by the finger, no indentation is left, as in a dropsical swelling, but the impression instantly disappears. Nor does the swelling lessen any by a horizontal position, as in a case of dropsy. Only one leg is affected at a time, but the other leg sometimes goes through with the same disease after the first has recovered.

The disease varies very much in its duration. In some instances it will terminate in two days, and in others it will continue a fortnight or three weeks. There is, in this disease, always more or less fever; in the commencement of it, especially, there is often much general heat, thirst, restlessness and want of sleep.

Domestic Remedies.—The best local application which can be made to the limb in the commencement, is alcohol or new rum, a little warmed. The whole leg should be kept moist with it for the space of twenty-four hours. A dose of Epsom salts should be swallowed, and a perspiration raised by the use of the antimonial powder, in eight grain doses, once in four hours. If there is sickness at the stomach, an emetic of ipecac. or of lobelia should be given, followed with a plentiful supply of warm water. Two tea-

spoonfuls of Epsom salts should be given, every day, until the swelling begins to subside. The drink should be water, with the chill taken off, lemonade, and barberry-water. The diet should be liquid vegetable substances, such as water porridge, bread-water, and flour gruel. To procure sleep, ten grains of the Dover's powder should be taken, once or twice, just before evening.

Usually, in about a week or fortnight, the swelling and pain begin to abate and the symptoms of the fever to diminish. It is a painful though not a dangerous disease. Death from this affection seldom or never takes place.

Professional Remedies.—If the swelled limb is very painful and sore to the touch, and the pulse is full, hard, and strong, blood should either be drawn from the arm or from the limb itself, by the use of leeches. The use of leeches is always preferable, where they can be obtained in sufficient numbers. Not less than a dozen should be employed, and at as many as two or three different times. The sal nitre, in eight grain doses, should be employed to cool the system as much as possible by a free discharge of urine, and to prevent the increase of the swelling. Much relief is obtained, in all inflammatory and febrile complaints, by a plentiful flow of the urine. If the urine is scanty, thick, and high-colored, it causes great restlessness and heat. Whatever relaxes the kidneys and promotes the passage of the water, is sure to be followed by a mitigation of the disease.

After the vehemence of the disease is somewhat mitigated, the leg should be bathed with a solution of the sugar of lead, eight or ten times a day. If the pain is severe and the soreness great, a tea-spoonful of laudanum may be added to the wash, every time it is used. Equal parts of new rum and vinegar, used warm, is a powerful agent in subduing inflammation.

Where opium cannot be used without increasing the heat, thirst, restlessness, and pain, Hoffman's anodyne and the acetate of ammonia should be employed. Blisters have, in some instances, been found beneficial where the heat of the body is not great. But above all the local remedies which can be employed, if they can be applied often and extensively enough, are soft, warm poultices, made either of rye meal and water, flax-seed meal, or of white bread. A poultice should never be allowed to become dry or hard, or be covered with any oily substance. If covered with lard or oil, we might as well use the lard or oil alone, and dispense with the poultice. To prevent its sticking or breaking, the poultice may be covered with a piece of old muslin or gauze.

SWEET FLAG—*Alcorus Calamus*.—This plant is too well known to need any particular description. The root is the part used in medicine. It is spongy, knotty, and marked with rings. The taste is warm, bitterish, and pungent; the smell aromatic. The spicy flavor of the sweet flag root has recommended it in the colicky pains of children. It warms the stomach and expels

the wind. In cases of weak stomach and indigestion, it is often used with advantage by adults. It is a tolerably good stomachic.

SWEET SPIRIT OF NITRE—Dulcified Spirit of Nitre—*Spiritus Etheris Nitrosi*.—This liquid is composed of nitrous acid and spirit of wine or alcohol. The composition is effected by distillation in a glass receiver or distillery. The process is somewhat difficult, and requires caution, lest the materials explode.

There is hardly a medicine in more common use than the sweet spirit or spirits of nitre, nor one which is more deservedly popular.

It abates the heat of fever, quenches the thirst, increases the flow of the urine and insensible perspiration, and relaxes the whole vascular system. It has a sourish, pungent taste, and a fragrant odor. It evaporates, unless confined in a close phial. The dose is from one to two drachms. A tea-spoonful may be given, every two hours, in a severe fever, in water or any other simple liquid. The sweet nitre relieves spasms and nervous strangury. Forty drops of laudanum or morphine, and four tea-spoonfuls of sweet nitre, given every hour or two, have been known to relieve the most violent cases of strangury or stoppage of the water. Six or eight drops in a little water is the best medicine we have ever used, in the case of new-born infants, where there is a delay in making water.

The sweet nitre, rightly used, will cure a fever without the aid of any other medicine. It is an efficient remedy in dropsy, or inflammatory diseases.

SYMPATHY.—This principle appears to us to be entirely theoretical. That the whole system participates more or less in the disease of any of its parts, is a matter of fact, established by daily observation and experience; but that one part or organ has such a connection with another as to disease that part or organ while all the other parts of the system remain unaffected, is a matter of conjecture merely. The particular connection which is supposed to exist between the uterus and breasts, and the throat and the sexual organs, is a matter of coincidence and not of sympathy. The simultaneous development of those parts and their functions take place in no otherwise than the maturity of other organs and parts.

SYMPTOMATIC.—Diseases which are merely symptoms of some other disease, such as a headache which arises from a foul stomach, and dropsy of the brain which arises from the bowel complaints of children.

SYNCOPE—Fainting.—See *Fainting*.

SYNOCHUS—Simple Continued Fever.—See *Fever, Continued*.

SYNOVIAL FLUID.—The greasy juice contained in the joints. Its use appears to be to produce an easy motion of the joints.

SYPHILIS—Pox—Venereal.—See *Venereal*.

SYRUP OF BALSAM.—Balsam of Tolu.—See *Balsam of Tolu*.

SYRUP OF LEMON.—Take of lemon-juice, after the fæces have subsided and it has been strained, three pounds; double-refined sugar, five pounds. Dissolve the sugar in the juice so as to make a syrup. This is an excellent medium in which to take powders and mixtures. It makes an agreeable drink, and when mixed with flax-seed tea, or a mucilage of slippery-elm and gum arabic, it greatly improves their taste.

SYRUP OF SQUILLS.—See *Squill*.

T.

TABES.—A gradual wasting or consumption of the whole body, but without cough, raising, or any particular affection of the lungs. The most remarkable symptoms are a wasting of the flesh, and debility, without fever. This is for the most part a disease of youth before puberty. It is owing to some natural defect in the constitution, aggravated by an unwholesome atmosphere, want of exercise and proper food, and excessive labor in manufactories, where they have no time for recreation and change of scene. It is apt to end in dropsy.

In this disease the patient should be supplied with the best and most nutritious food, and take as much exercise in the open air as he can bear without fatigue. A warm bath, quinine, elixir vitriol, rust of iron, and chalybeate waters, are all serviceable in their turn, and should be employed as the symptoms of the disease may require. The bowels must be regulated by mild purgatives, and the blood renovated by the use of ripe acid fruit. A residence by the sea-board and a fish diet are always worthy of trial. If meat increases the heat, quickens the circulation, and disturbs the sleep, it should be laid aside entirely. Tabes is a difficult disease to cure.

TÆNIA.—The Tape-worm.—It is a long, flat, jointed worm, resembling a piece of tape. The spirits of turpentine, in the dose of a table-spoonful, once a day, for several days in succession, will destroy and expel it. See *Worms*.

TANNIC ACID.—Tannic acid, in its pure state, is a new article of medicine. It is commonly obtained from nutgalls, although it exists in all barks and substances used to tan leather. Tannic acid is of a yellowish-white color; of a strongly astringent taste; and soluble in water, alcohol, and ether. Dose from a quarter of a grain to two grains, either in the form of pill or dissolved in water. It has been used with success in arresting bleedings from the womb, lungs, and stomach. It has cured diabetes, and proved beneficial in stopping bleeding, both internally and externally. In cases of menorrhagia, or bleeding from the womb, it is given in the

dose of two grains. In any organic disease of that organ, its use is improper. So powerful an astringent, capable of exerting such wonderful effects upon raw hides and skins, must have great effect upon the living animal membranes and organs.

In bleeding from the lungs, the tannic acid, in one case, completely succeeded where other remedies had failed, and, in three others, was wholly successful. In diseases of the mucous membrane, such as the whites and clap, its action by way of injection is no less favorable than when taken into the stomach. Upon the whole, we look upon this medicine as a valuable addition to the means of curing diseases.

TANSY.—The leaves and seeds of this plant are a warm bitter, and promote the menstrual function. It may be used in the form of a tea, or of essence. It is often employed to expedite lingering labors, and to hasten the expulsion of the after-birth. A strong tea is good for the vapors, flatulence, and hysterics.

TAR.—This substance, dissolved in water, is often used in chronic rheumatism, dyspepsia, hypochondrism, and complaints attended with want of heat and excess of phlegm. It is a good medicine in chronic catarrh and obstinate coughs. It warms the blood, promotes the urine, animates the feelings, and invigorates the digestive powers.

The tar ointment has often been found to cure foul ulcers, old sores, and the scald-head. It is made by melting together five parts of tar and two of yellow wax.

TARTAR EMETIC—Tartrate of Antimony and Potash.—This article is a composition of tartaric acid and the oxide or rust of the metal called antimony, and potash. It is a neutral substance. The antimony itself is found in the shape of an ore in the earth. When melted, to free it from impurities, and hardened by cooling, it is of a white silvery color, very brittle, and quickly oxidized by the air. In its native state, it somewhat resembles anthracite coal. The pure metal is hard and easily melted.

The tartar emetic is one of the most valuable medicines in our possession. It is a white powder, rather lighter in color than calomel. It is both an emetic and a cathartic. Three grains are a sufficient dose for an emetic, and this should be given, in solution, at three different times, about a quarter of an hour apart. It dissolves readily in hot water and alcohol or new rum. If the use of the medicine is continued, it operates upon the bowels.

The quarter of a grain is a sufficient dose for a child from one to two years old as an emetic. In general, it is an unsafe emetic for young children.

In small doses, tartar emetic or tartarized antimony increases all the secretions of the body, and lessens the heat. The skin, the lungs, the kidneys, and the bowels, are all affected by it. In a most signal manner, it relaxes the vascular system, moderates the action of the heart, and lessens the force of the circulation. Even where it does not excite nausea, it produces all these effects.

The best dose in which to give it, in order to produce sweating and to lessen fever, is that of a quarter or fifth of a grain. We prefer the quarter of a grain dose, whether we use it in a fever or in an inflammatory disease. In peripneumony, pleurisy, and other inflammatory diseases, if given in this dose often, it will accomplish all the effects which have been ascribed to it when used in larger doses. The operation of tartar emetic comes the nearest to blood-letting, in its effects upon the system, of any medicine in use. It lessens the size as well as the velocity of the pulse, and makes an impression upon the system which is felt in all its parts.

In fevers, it was the favorite remedy of Fordyce, and has maintained its reputation to the present day. A single dose will often still the greatest commotion in the system, and produce composure. Its most signal effects are upon the skin; when the hottest and the driest, a few small doses of tartar emetic will often abate the heat and bring a moisture.

TARTARIC ACID.—This acid is obtained from the settlings of wine, or a deposit of super-tartrate of potash. The acid consists of solid, square, transparent crystals. They readily dissolve in water, and make an extremely sour liquid. It is used principally in the formation of neutral salts.

TARTRATE OF ANTIMONY—Tartar Emetic.—See *Tartar Emetic*.

TEA.—The two principal kinds of tea are green and black. Of each there are several varieties, but the medicinal properties of all are nearly the same. The black teas are considered the most harmless, and the green the most exhilarating. The virtues of tea are said to reside in a crystallizable principle, named *thein*; the same or a similar principle is thought to exist in coffee. The effects of coffee upon the system are nearly those produced by tea. The stimulation of coffee appears to be more permanent than that of tea, much in the same way that the stimulation of rum is more permanent than that of champagne.

Tea is astringent, excitant, and carminative. It allays sickness at the stomach, and produces composure of mind. In large quantities, it produces wakefulness, tremor, palsies, nervous affections, and aggravates hysterical and hypochondriacal complaints. In cases of mental and bodily fatigue and exhaustion, a cup or two of tea is a great refreshment. As a constant beverage, if drank at all, it should be used with moderation. The habitual use of strong tea often induces dyspepsia and many other distressing complaints. Taken by individuals in perfect health, it has less effect than upon the weak and feeble. Tea, coffee, tobacco, and rum, do nothing towards supporting our bodies, while they take a great deal of money from our pockets.

TEETH.—The whole number of teeth, at full maturity, is thirty-two; sixteen in each jaw. This number is subject, however, to some variation, but there are seldom less than twenty-eight. There are eight incisors, or cutting teeth, four in each jaw;

four canine teeth, or two in each jaw; and twenty double teeth, ten in each jaw. The double teeth are sometimes called grinders, or molares, a Latin name, which means grindstones. The two first grinders on each side are further distinguished by the name of bicuspides, because they run into two spear-shaped points. These have only one prong; whereas the rest of the double teeth have two in the under jaw, and, in the upper, three. The wisdom teeth,—the two last in each jaw,—appear last, and in some cases do not come through until forty.

Each tooth is covered by a hard, white, glassy coat, called enamel. It is set in a socket, and the socket is set in the jaw-bone. A part of the socket is sometimes extracted with the tooth; but this is only the case where the tooth grows to it. In ordinary cases, the teeth are separated from the socket by the periosteum.

The root of each tooth has a small hole, which begins at the point of the fang and runs into the centre; this hole receives a nerve, an artery, and a vein. The teeth are bones, but much harder and more compact in their structure than bones in general. They are capable of inflammation and swelling, although no blood-vessels or absorbents have been discovered in their solid part. Blood is carried into the centre of the tooth, but how it is distributed can only be conjectured or inferred from analogy.

The first set, or sucking teeth, are twenty in number, as will be perceived by the article on teething, and are generally shed between the seventh and fourteenth year. These are not pushed out, as is commonly thought, by the second set, but the sockets are absorbed, and in some instances the roots, and give room to the new set. Each set is contained in a separate set of sockets. In teething, the gum wastes away or is absorbed; the tooth does not cut its way through. It is only where the gum thickens by inflammation and swelling that nature needs to be assisted by cutting down upon the tooth. When the process is natural, there is no inflammation or thickening of the gum. This is owing to some unnatural irritation in the tooth.

TEETHING.—The whole number of a child's first teeth are twenty, although sixteen are all that commonly appear the first two years. There are four cutting teeth in each jaw, or four upper and four under cutting teeth. They are called the cutting teeth or incisors, because they have a sharp edge to cut the food. These teeth have but one fang. There are four canine teeth, two upper and two under; these have only one prong or root. The two upper ones are called eye teeth. The child cuts two grinders or double teeth. Some children cut four double teeth. They are called double teeth because they have two sharp edges with a groove between them, and resemble two cutting teeth put together. They are also called grinders, because they grind the food after it is cut by the fore teeth, or torn to pieces by the eye teeth. The double teeth of the under jaw have two prongs, and the double teeth of the upper jaw have three prongs, except those next the eye teeth, which have but two.

In children, two of the lower cutting teeth are commonly the first to make their appearance. Next to these, two upper teeth, which correspond to the lower ones, make their way through the gums. The four double teeth appear next. The canine and the eye teeth are the last in the set to make their appearance.

The process of teething to some children is productive of no evil consequences, but to others it brings sore distress and prolonged disease. The time of teething continues, in general, from the fifth or sixth month to the sixteenth month. Some children will begin to cut teeth as early as three months, and others not until they are eight or twelve months old. If the first teeth are cut easily, it is a pretty sure sign that there will not be much trouble with the others. But if the child begins to cut its teeth in the hot weather, about the time that bowel complaints make their appearance, it often has a long sickness, if the disease does not prove fatal. It is very fortunate if the process of teething commences in the winter, or early in the fall, and closes before summer.

When teething commences, the child begins to drivel; the skin becomes hot; the gums look red and swelled, and are tender to the touch. The child often makes attempts to rub them, as if there were a violent itching, and will be quiet when they are gently rubbed by its mother or nurse. Its sleep is interrupted and imperfect, and there is more or less disorder of the stomach and bowels. Most children are loose, although some will be costive. A slight degree of looseness is not, perhaps, productive of much evil, but in hot weather it is very apt to run into a severe disease of the bowels. We have some doubts about the truth of the old doctrine that a looseness is an effort of nature to carry off the disease. It appears to us to be an indication that the irritation of teething is severe enough to disorder the bowels, and that the symptom, instead of being favorable, should be closely watched and properly restrained. Gripings, green stools, undigested food, mucus, and watery matter, must be considered as indicative of a disease of the bowels, and call for medical aid.

Teething very often produces convulsive fits, sourness of the stomach, and a remarkable hotness of the belly. There will appear to be a stoppage, which produces a hotness of the belly, of the soles of the feet, and of the palms of the hands, followed very soon by a convulsion fit. The fit may often be prevented, if the bowels can be emptied in season by a dose of oil or an injection. If the bowels are full, hard, and hot, no time should be lost in procuring a free evacuation.

Domestic Remedies.—In ordinary cases of teething, where there is no great disorder of the stomach or bowels, no other remedy will be required but an occasional dose of the calcined magnesia, to correct the sourness of the stomach, or a little poppy-tea or paregoric, to make the child sleep and to deaden the itching and pain of the gums. A few tea-spoonfuls of lime-water, or of burnt

oyster-shell water, will correct the sourness of the stomach. Prepared chalk is often used, but it is too apt to clog the stomach.

If there is much griping of the bowels, peppermint, spearmint, or pennyroyal tea should be given, every little while, in sufficient quantity, and of a sufficient strength, to bring a moisture upon the skin. Ginger tea, strained, may be given.

If the bowels become seriously disordered, with a constant fever and loss of appetite, or indisposition to nurse, the best medicine which we have ever used is a mixture of castor-oil and paregoric or laudanum, given every day. A table-spoonful of castor-oil may be given to any child after the age of teething commences, or after it is nine months old. To this from three to five drops of laudanum should be added, or forty drops of paregoric, which contain an equal amount of opium. To a child eight months or a year old, six drops of laudanum may be given with a table-spoonful of oil. When there is sourness of the stomach, or of the discharges from the bowels, a tea-spoonful of the calcined magnesia should be used instead of the castor-oil. If there is sickness at the stomach, five grains of calomel should be given in preference to any other physic, as it is the best of anything to stay upon the stomach. It is always a good sign if the anodyne produces a sweat.

In some cases it will be advisable to cut the gums, especially if they are much swelled and inflamed. This may be done with a sharp penknife or a gum lancet. If the skin is hot and dry, it should be bathed two or three times a day with tepid water. If the brain is affected, the head hot, and the eyes engorged with blood, five or six leeches must be applied to the forehead.

If children do not nurse, their food should be boiled milk and water, about half and half. A thin gruel, made of flour well boiled with water and a little salt, is the best food to restrain the looseness of the bowels.

In the hot season it is of the greatest importance that children should be kept cool. Many more children die from the effects of teething in the cities than in the country towns, where they are exposed to a less degree of heat. Fewer die upon the sea-shore than either in the cities or inland towns. The coolest places are in all respects the safest and best for teething children. We advise all parents, who travel with children of this age, to take them to the sea-board. The clothing of children, in teething, should be light, and their food restricted to milk and bread, boiled rice, molasses and water, with bread soaked in it, custards, and Indian and flour puddings. Children do not thrive well upon solid food for some months after all their teeth are cut.

TEMPERAMENT.—Four different temperaments have been ascribed to mankind,—the *phlegmatic*, the *sanguine*, the *bilious*, and the *nervous*. But as the characteristics or signs of the different temperaments, as they have been laid down in books, refer only to white people, and as people of other complexions are known to possess the same constitution of body, to be subject to

the same affections of both mind and body, and to discover the same diversity of character, the whole doctrine must be discarded as erroneous. Every one must perceive the impossibility of determining the temperament of an African, an Indian, or an Asiatic, by the characteristics which are defined in medical books.

TEMPERANCE. — Temperance is an essential condition of a healthy body and a sound mind. He who eats, drinks, sleeps, and labors temperately and moderately, avoids a multitude of worldly evils, prevents disease, and lays a foundation for old age and much enjoyment. Temperance produces an evenness of temper, fairness of the skin, liveliness of the spirits, brightness of the countenance, firmness of purpose, clearness of thought, and improves personal beauty. It is a great antidote to depression and anxiety of mind, gives mobility to the joints and muscles, and produces great strength. The flesh is sound and the blood is sound. The bones are stout and the whole frame full of vitality.

The glutton, the drunkard, the debauchee, and the sluggard, are as deficient in muscular strength as they are in firmness of purpose. Dulness, heaviness, and despondency, sooner or later, afflict them all. They are subject to loathsome humors and diseases of the skin, to putrid fevers, to frightful cramps and spasms, inveterate sores, cancers, and dangerous fits.

Temperance invites esteem, and leads to good fortune. It is better than riches. The temperate are the only true freemen, as they are not under the bonds of vicious habits. An intemperate habit is a harder master than the autocrat of Russia. The proper quantity of food, drink, sleep, and exercise or labor, must be learned by observation and experience. The judgment of people will be more or less improved in this respect, as in everything else, but all are capable of arriving at a tolerably correct standard.

We do not wish to confound abstinence with temperance. The temperate man may always satisfy his appetite; the abstinent man takes less than he actually needs or can bear. Abstinence is practised to cure diseases; temperance, to prevent them. The laborious and children should always be well fed, for in them the blood circulates vigorously, and is soon bereft of its vital properties. The secretions are profuse and quick, and the vessels soon emptied. During the period of growth, the demand for food is greater than in after life. Vegetable food resolves inflammation and prevents putridity. Animal food, in great abundance, pre-disposes the system to inflammation and humors.

Nature has set bounds to the appetites and passions, and these can never be overleaped with impunity. The system is sometimes slow in undermining, but in time it gives out, and is hard to be repaired. Long days and nights of pain and anguish are the sure penalties of sensual indulgence.

The value of temperance is inestimable. If a bone is accidentally broken, the system is capable of sustaining the shock, and the divided edges are soon united. If the flesh is torn or wounded, it soon heals, without the danger of locked jaw, or mor-

tification. If a fever, an inflammation, or a cutaneous disease is excited, it is commonly of short duration, and mild in its nature. The constitution is capable of resisting most diseases, and of recovering from those which are unavoidable.

The use of intoxicating liquors produces a more certain and rapid derangement of the system than any other species of intemperance. A single glass of rum or brandy produces an inflammatory state of the system. This state, if often reproduced, is almost certain to end in the disease of one part or another. How can it be otherwise? The lungs, the head, the heart, stomach, and liver, are for days and weeks engorged with an unusual quantity of blood. The head is inflamed, the heart is inflamed, the skin is inflamed, and the deep-seated organs are inflamed. A fire is kindled up in every nook and corner of the system. Every organ, gland, and follicle is exposed to the flames. In complete intoxication the brain is in a lethargic state, as if an effusion of blood or water had actually taken place. The senses are as much lost as in the delirium of a typhus fever. The breathing is stertorous, the power of moving suspended, and the muscles loose and flaccid. Does any sensible person believe that such a state can be wholly or partially produced without a serious shock to the system? Can a surer way be taken to provoke disease, and invite misery, poverty, helplessness, and death? Let parents beware of what examples they set to their children, and children take early heed of the misery and wretchedness which are produced by ardent liquors and intoxicating beverages.

TENDON.—The white, transparent part of a muscle. The ends of muscles are always tendinous. In common language, it is the gristle.

TENESMUS.—A constant desire to discharge the contents of the bowels without the ability, attended with a sense of constriction, or bound state of the belly.

TERTIAN AGUE.—An intermittent fever which returns every third day.—See *Fever and Ague*.

TETANUS—Locked Jaw.—See *Locked Jaw*.

TETTER—Herpes.—The skin is subject to an indescribable variety of eruptions, pustular tumors, ulcers, and humors. To treat them successfully the physician ought to know the nature of the disease for which he prescribes; but, perhaps, to know this, it is not always necessary to know also the precise species to which each disease of the skin belongs.

Four kinds of the tetter are quite common diseases in New England, and pretty well known to people in general. The tetter consists of an assemblage of little creeping ulcers, which come in the form of small pimples or pustules, clustering thick together, and which itch excessively, and finally terminate in dry scales or scabs. They seldom eat below the skin so as to form a permanent scar, though sometimes the skin will be so deeply corroded as to destroy its texture as far as the ulcer runs. We have seen cases of the tetter which looked as if a large blister had been drawn in

several places, and left the naked surface in a state of suppuration. In the *tetter*, the blotches are very apt to run together and to form one ragged, broad, suppurating ulcer. The *dry tetter* is the most harmless of either of the kinds of this disease. It will make its appearance in any part of the body, but commonly comes out upon the face, neck, arms and wrists. The itching which attends it makes it exceedingly troublesome, but otherwise it is entirely harmless. At first there appears a cluster of pimples or broad red spots, which do not continue long before they die away, and leave the places covered with a transparent thin scale; to this succeeds another crop of the same nature, until the face, neck, and other parts have been completely overrun with them.

The second kind of this eruption is called the *pustular tetter*. This is the kind which so often appears behind and about the ears of children while they are teething and quite young. It appears in separate pustules, which run together and form a common sore or ulceration of the skin. This eruption, after continuing about the ear a while, will extend to the eyes and cause in them a troublesome inflammation and ulceration. The pustules in this kind of tetter will appear to contain only a watery fluid, but after they run together and form a common sore, there will be a watery suppuration, or a mixture of water and pus. The ulceration will be covered with a kind of tough slime. This slime is hot, biting, and inflames the surface wherever it runs. The matter often runs among the hair, and mats it hard together. This kind of tetter will sometimes excoriate the skin. It will often hang about the child for six months or a year. It rarely deranges the health or ends in any serious disease. Much is said about repelling the eruption, or *driving it in*; but we have never seen an instance of this, and have but little faith in the idea of driving in diseases upon the brain, stomach, or bowels. With many physicians, every disease of the stomach, bowels, or lungs, is a humor which has been repelled from the skin, and must be driven back again. They hardly dare touch a cutaneous eruption, for fear of driving it in; and thus children, and sometimes grown people, are left to worry out a tedious, irritating disease of the skin, which might easily have been cured in the beginning. The tetter or running sores about the ears or heads of children have been supposed to be really beneficial to children while teething, or while they are affected with a bowel complaint; but this idea, to say the least of it, is mere conjecture. The disease is evidently owing to a watery, impoverished state of the blood, and affects children whether they are teething or not, or whether they have bowel complaints or not.

A third kind of this humor is the *miliary tetter*. This kind of tetter most commonly breaks out about the loins, breast, private parts, and in the groins. The disease is sometimes very troublesome to old people, in whom it appears about the seat and perineum. It is attended with itching, smarting, and heat. The humor, in this form, consists of small red pimples about the size

of millet seeds, or mustard seeds. From these little pimples there oozes a pure watery matter, but which is very biting and corrosive. Wherever it spreads it excites a new crop of pimples. This matter becomes very tough and sticky, so that whatever is applied to the part is removed with much difficulty.

A fourth kind of this humor is called the *eating tetter*. This kind appears in small, smarting ulcers, or little blisters which soon begin to ulcerate. The skin of the part becomes red; an irregular, shapeless blotch forms; the skin is excoriated as by a blister, and a large, spreading ulcer is formed. We have seen the neck, head, and breast of children half ulcerated over by this kind of tetter. It runs excessively, and the itching, smarting, and burning are extreme. The ulceration in this kind of tetter is much deeper than in either of the other kinds. It resembles a large burn, or scald, and the thin, sharp, watery matter discharged from the ulcerated skin penetrates, in some cases, even down to the muscles. The ulceration will finally dry away into a large crust, which, at length, peels off. This species of the disease is sometimes so severe and distressing as to destroy the appetite and to raise a considerable degree of fever.

The tetter in all its forms appears to be owing to a thin, watery state of the blood, induced by want of nourishment, or by feeding upon food which does not agree with it, by want of cleanliness, by foul air, and, probably, by particular states of the atmosphere which directly debilitate the system or operate upon the skin.

Domestic Remedies.—The skin should be thoroughly soaked with warm water every day, and made entirely clean. When the disease runs upon the head, the hair should be shaved close, and the whole head covered with sweet oil, to prevent the matter which oozes from the ulcers from excoriating the skin any further. The oil should be washed off every day by a little castile soap and water, and put on anew. In the *dry, pustular, and miliary tetter*, a weak solution of the sugar of lead should be first applied. A solution of white vitriol, in the proportion of four grains to two ounces of water, is a good application. Rose-water is a peculiarly suitable wash. After the humor begins to run and to mature, there is no better application than the ointment called 'Turner's cerate. The whole diseased surface should be covered with it, by spreading the ointment upon a piece of soft linen. The covering should always be light as possible, lest the part should become too hot. Before the eruption begins to run, it may be washed in rum or diluted alcohol; but after the pimples have broken out into open sores, the spirits will be too heating and stimulating. The matter of the humor may be prevented from running, by strewing upon it the carbonate of magnesia, finely powdered, prepared chalk, or hair-powder. Pomatum is a good application for small children. Mutton tallow and the simple cerate are also good local remedies. An ointment made of cream and the inner bark of the elder is a cooling and suitable medicine. The Ethiop's mineral, in a dose of two grains, once a day, should be given inter-

nally. A dose of the cream of tartar should also be given every other day.

The eating tetter often requires a treatment peculiar to itself. Besides the local remedies, the system will require to be strengthened by the use of iron, quinine, and the mineral acids. In every species of the tetter, the itching and local irritation will often be so great as to require the use of laudanum, morphine, paregoric, or the Dover's powder, but especially in this. In some cases of the eating tetter, we have been obliged to steep a few grains of opium in water, and apply it to the surface of the running ulcer, to allay the intense itching and burning. A tea made of the white poppy-heads will answer the purpose very well. The child should, at the same time, be made to drink of the poppy tea. After washing and soaking the raw surface every day, for half an hour at a time, with warm water, a strong decoction of the poppy tea should be poured on, or laid on with soft linen.

To neutralize the sharpness of the running matter, a layer of charcoal finely powdered should be strewed on. The charcoal absorbs the matter, cleanses the ulcer, and destroys the bad smell; for these ulcers will sometimes be really phagedenic. Weak solutions of the chloride of lime or soda may be employed to correct the fetor of the sores. A strong tea made of the wild indigo root, and applied as a wash, will have a tendency to heal the ulcers.

The ointments proper to be used in this species of the tetter are the calamine, the citrine, and the simple ointment or simple cerate.

Weak solutions of the sugar of lead and of white vitriol are the most cooling washes which can be used. The Griffith's mixture, given in a dose of a tea-spoonful three times a day, is one of the best tonics. All kinds of acid fruit and watery vegetables should be avoided in either species of this disease. The food should be milk, eggs, and fresh meat, white bread, and rice and flour puddings. Butter, cheese, fried cakes, and all fat meats, are improper and unwholesome. Vegetable acids of every kind are pernicious. The physic should be cream of tartar, sulphur, Rochelle powders, and calomel. The syrup of buckthorn has sometimes been found to cure the disease, when used in connection with the calamine ointment, or Turner's cerate, applied to the diseased surface.

In those cases which prove obstinate, the spring or mineral waters should be tried.

Professional Remedies.—It is the duty of the physician, if possible, to ascertain the cause of the disease; the error of diet, or the poisonous article of food which produces it,—for almost every article of food is poison, in some respect, to particular people;—whether the child is sufficiently fed, or fed upon unwholesome food. It may have been produced by the effect of some other disease upon the system, or some fault in the digestive organs. Calomel, if rightly used, is an extraordinary medicine.

It possesses the most healing properties of any article in the *materia medica*. It should, however, be used with the greatest caution, and never continued above five or six days in succession, without an intermission of two or three days. The child should never be salivated; it is enough to moisten the mouth. The sarsaparilla is often effectual in removing cutaneous diseases. The iodine should be tried. Decoctions of the cicuta should be applied as a local remedy where other washes fail. A solution of the corrosive sublimate is often applied to the *dry, pustular*, and *miliary tetter*, but, really, it seems to us improper in the *eating tetter*.

THORACIC DUCT.—The trunk of all the vessels which secrete the chyle and the lymph. It is about the size of a crow-quill, and resembles an artery. The lacteal and lymphatic vessels all terminate in this duct near the posterior opening of the midriff. The thoracic duct extends from thence, in a serpentine course, along the spinal bones, to the union of the left subclavian and jugular veins, where it empties the chyle and lymph. This is the fundamental vessel of the system, as it receives and conveys into the blood-vessels all the nutriment of the body.

THORAX—Chest.—See *Chest*.

THORN APPLE—Apple Peru—Datura Stramonium.—See *Apple Peru*.

THOROUGHWORT—Boneset—Eupatorium Perfoliatum.—This plant may be found in almost every meadow and marshy place in the Union. The stem is erect, and rises to four or five feet in height, perforating the leaves at each joint. It is hairy, woolly, and near the top spreads into numerous branches. The leaves are rough and indented. The flowers are white, and appear in midsummer. The medicinal parts are the leaves and flowers. The thoroughwort is an emetic, cathartic, and sudorific. In correspondence with its name, it acts *thoroughly* upon the stomach and bowels. In small doses it is a tonic.

Where it is given to evacuate the stomach and bowels, a strong tea is used. The dose is a tea-cupful every half hour until it operates as a cathartic. In bilious colic, and in all cases where the stomach is oppressed with bile, the thoroughwort is one of the best remedies. It is a safe domestic medicine to use in the commencement of febrile diseases, jaundice, and colds. It may be used in the form of powder, tea, tincture, or extract.

The extract, in external appearance, resembles aloes. It is an active and easy cathartic. The dose is four or five pills of the common size.

The dose of the powdered leaves, for a sudorific and tonic, is from twenty to thirty grains, every two hours.

In a costive, indolent state of the bowels, the thoroughwort is a peculiarly appropriate remedy. Where it operates as an emetic, it produces, at the same time, a profuse sweat. It forces open the pores, and produces something of the same kind of relaxation of the vascular system which follows the use of tartar emetic. It

may be employed in many diseases, but it operates to most advantage in remittent fever, jaundice, and accumulations of bile in the stomach and bowels. The hot tea is an efficacious medicine in suppressions of the menstrual function. Besides the profuse sweat which it excites, it relaxes the vessels of the uterus, and operates upon that organ as it does upon the skin.

THROAT AFFECTION, OR FAILURE OF THE SPEECH.—This disease has either been recently discovered, or its prevalence has been much greater of late years than formerly. We are inclined to think that the disease never attracted the particular notice of former ages, and that it is only of late years that it has been properly defined, and distinguished from other diseases.

The affection seems to have been the most common among clergymen, although instances of it occur among singers and other classes of people.

The cause of it, as nearly as we can ascertain, is the excessive exertion of the voice, together with an effeminacy of constitution, or derangement of the general health.

The seat of the affection is the top of the windpipe, or the larynx. There is, in most cases, no cough, or soreness of the part which can be discerned. In a female singer whom we once attended for this affection, there was a perceptible redness at the entrance of the throat, which involved nearly its whole circumference, but no swelling or difficulty in swallowing. The complaint was cured in a few weeks, by a suspension of singing, and using a solution of white vitriol for a gargle. We are inclined to think that there is a sub-acute inflammation of the vocal muscles, although no external signs may be visible. We can scarcely conceive that mere relaxation can produce a permanent disease. Fatigue, faintness, and exhaustion, the ordinary causes of relaxation of the muscles, are in general very soon recovered. A permanent atony may be produced by paralysis, but the throat affection is not of this nature. In another case which came under our observation, there was a total loss of the voice for two years, but the faculty of speech finally returned again as well as ever.

The affection commonly comes on very gradually. The person feels only a slight degree of hoarseness of the voice, and this only at particular times; but at length it becomes difficult to speak in the usual tone, and he is obliged to lower his voice. Some degree of dryness is felt in the throat, and a kind of an aching, which does not fairly amount to a pain. The vocal muscles are evidently fatigued in speaking, which is manifested by a hollowness of the voice. Dyspeptic and nervous people often experience a similar kind of inability in speaking, but in them the same inability is felt in all the muscles of the body.

Some suppose the disease to be produced by the use of tobacco; but it often occurs in those who do not make use of that substance, particularly in females who indulge much in music. Dr. Mauran, of this city, who has made this affection a particular sub-

ject of inquiry, has ascertained that there is as many, if not more, cases occurring among those who never indulge in the use of tobacco, as among chewers and smokers. The excessive use of tobacco may, in particular people, aggravate the disease, or assist in its production, but the real cause of the disorder, we think, will be found in the excessive exertion of the vocal organs by people of effeminate constitutions and habits. We are even disposed to adopt the opinion of Dr. Mauran, that the use of tobacco may in some instances contribute to cure the complaint. This opinion is fairly inferable from the cases of recovery which he has recited.

The cure of the complaint must consist in a suspension of public speaking or singing, and in the use of such medicines as will restore the strength of the vocal muscles. The confirmation of the muscular strength in general, by exercise or labor in the open air, or by the recreation of travelling, will contribute to the restoration of the strength of the vocal muscles. The quinine, mineral acids, especially the elixir vitriol, and chalybeate medicines, are the most proper to be used. Cold bathing, especially the cold shower-bath, will greatly assist in the cure.

THROAT-ROOT—*Water Avens*—*Geum Rivale*.—This plant may be found in bog meadows. The root is a powerful astringent. In cases of canker and ulcerated sore throat it is used with success as a gargle, and drank as a tea. It is said that the powdered root will cure the fever and ague.

THRUSH.—An ulcerous state of the mouth and throat. See *Canker*.

THYMUS GLAND.—This gland is situated between the windpipe and the upper end of the breast-bone. At birth it is much larger than in the adult. It is of a triangular shape, soft consistence, and pink color. When divested of its case, it is found to consist of two lobes, one on either side, which adhere together. It continues to grow until the child is about two years old; from that time, it gradually diminishes in size, until the twelfth year, when it becomes scarcely distinguishable from the surrounding cellular substance. It has no excretory duct, and its use is not known.

THYROID GLAND.—This gland, the use of which is not known, is situated on the first and second rings of the windpipe. Its surface is smooth and uniform. Its color is a dark-brown. It consists of several lobules adhering together. It has arteries, veins, and lymphatic vessels, but no excretory duct. Its office would *seem* to be, therefore, the secretion of venous blood and lymph.

TIBIA.—The shin-bone.

TIC DOULOUREUX—*Neuralgia*.—This disease consists in a painful state of the nerves of the face. There are no signs of inflammation, no redness, swelling, increase of heat, or fever. Indeed, there are no external signs of the disease. The pain always follows the course of the nerves, and when the affected

nerve is divided by the knife, above the place of the pain, in some cases, it immediately ceases. This cannot, however, be considered as a certain sign that the pain is in the nerve, since pain in any other structure would cease just as soon on a division of the nerve which penetrated it.

It is said that the slightest touch will bring on a paroxysm of pain. The nerves of the cheek-bone are the most frequently affected, but all the nerves of the face and jaws are subject to the disease. The pain, while it lasts, is said to be the most exquisite torture, and but for the intermissions which occur, it would be absolutely insupportable for any length of time. Even the nerves of the ear are sometimes the seat of the disease. Tic douloureux resembles the nervous headache or hemicrania in its nature, and, like that disease, is generally periodical, the paroxysms coming on regularly every day at a particular hour. The intervals, however, sometimes last a number of days or a week or two.

During a paroxysm of tic douloureux, tears start from the eye over the affected nerve; the pain darts in different directions along the branches of the nerve; and convulsive twitchings tell the spot where the anguish emanates. Compared with the toothache, the pain of neuralgia is superficial, and more acute.

Remedies.—The pain may be palliated by opium and other narcotics. A tea-spoonful of laudanum or liquid morphine may be given every two hours, until the pain is allayed; or two grains of opium may be given in its place. The extract of hemlock, or cicuta, in two or three grain doses, every three hours, will sometimes succeed. The extract of belladonna, in the dose of a grain, and taken as often, has even succeeded better than the cicuta.

A strong laudanum poultice applied to the painful spot will procure relief. Blisters drawn over the diseased nerve, leeches applied to the face, and the hot-drops applied both internally and externally, should be tried. The mercurial ointment and calomel are said to have effected cures.

The face should be steamed, and the body relaxed by physic, emetics, and nauseating doses of ipecac. or lobelia. The most successful practice, however, that we have ever tried, is to give the extract of stramonium, in one grain doses, every two or three hours during the paroxysm, until some degree of narcotism is produced and the pain is relieved, and the Fowler's solution of arsenic, in doses of six or eight drops, three times a day, during the intervals. The stramonium should be discontinued as soon as its effects are manifest, and resumed a little in anticipation of the next expected return of the pain. The arsenic should not be taken when the stomach is entirely empty, but about an hour after eating moderately of plain food or gruel. Should it occasion nausea, the dose must be lessened, or it may be increased a drop or two if the stomach bear it without sensible effect. The precipitated carbonate of iron, in twenty grain doses, three times a

day, is one of the most appropriate remedies, and may be used instead of the arsenic if preferred. Dividing the nerve above the seat of the pain has sometimes been practised with success, but it is an operation seldom resorted to, and is by no means a certain cure.

TINCTURE.—Medicines dissolved in alcohol or proof spirits. Alcohol or rum dissolves a great variety of substances, such as resin, camphor, essential oils, extracts, barks, roots, and gums; and, when so dissolved, they will keep for a long time. The spirituous solvent is sometimes impregnated with ammonia or ether, to increase its power.

In general, it is only necessary to put substances into diluted alcohol or proof spirit, to let them stand a week, and to strain off the liquor. The alcohol or proof spirit dissolves only a certain amount of the substances before it becomes saturated, or can dissolve no more. If more of the substance is added, the tincture is no stronger. If a tincture is to be a saturated solution, there is no need of weighing or measuring the substance to be dissolved.

It will be necessary, therefore, to enumerate only a few of the tinctures.

TINCTURE OF ALOES.—See *Elixir Proprietatis*.

TINCTURE OF BLOOD-ROOT.—Put two ounces of powdered blood-root into one pound of proof spirit; let it stand a week, and strain the liquor. The dose is from thirty to sixty drops, twice a day.

TINCTURE OF CAMPHOR.—Dissolve one or two ounces of gum camphor in a pint of proof spirit. Dose, from half a tea-spoonful to a tea-spoonful. This tincture is also used as a wash to the surface in rheumatism, palsy, tumors, and inflammations.

TINCTURE OF CASTOR.—Put an ounce and a half of Russian castor, in powder, into one pound of alcohol; let the solution stand for a week, and strain the liquor. The dose is from one to two tea-spoonfuls.

TINCTURE OF CATECHU.—Put three ounces of the extract of catechu, and two ounces of the bark of cinnamon, bruised, into two pounds and a half of diluted alcohol; digest for a week, and strain the liquor. The dose is two or three tea-spoonfuls, frequently, in water or red wine.

TINCTURE OF COLUMBO.—Put two ounces and a half of powdered Columbo-root into two pounds and a half of proof spirit; let it stand a week, and strain the liquor. It is a most excellent bitter. The dose is two or three tea-spoonfuls. A child from one to three years old may take half a tea-spoonful.

TINCTURE OF FOXGLOVE.—Put one ounce of the dried leaves of common foxglove into eight ounces of proof spirit; let the solution stand a week, and strain the liquor. The dose is ten drops, gradually increased.

TINCTURE OF GUAIACUM.—Put one pound of gum guaiacum into two pounds and a half of proof spirit; let it stand for a

week, and strain the liquor. The dose is from a tea-spoonful to a table-spoonful. A child between one and three years old may take twenty to thirty drops, in water. It is an efficacious remedy in chronic rheumatism and dyspepsia.

TINCTURE OF LAVENDER, COMPOUND—Red Lavender.—Take of spirit of lavender, three pounds; spirit of rosemary, one pound; bark of cinnamon, bruised, one ounce; flower buds of the clove-tree, bruised, two drachms; nutmeg, bruised, half an ounce; wood of red saunders, rasped, three drachms. Let the whole stand for a week, and strain the liquor.

The dose is from ten to a hundred drops, in sugar and water, or dropped upon sugar.

TINCTURE OF LOBELIA.—Put two ounces of the dried plant into a pint of new rum, or proof spirit; digest for a week, and strain the liquor through linen. Dose, a tea-spoonful, repeated at intervals of half an hour. A child between one and three years old may take from twenty to forty drops, increased until vomiting is produced.

TINCTURE OF MURIATE OF IRON—Tincture of Iron.—Take of carbonate or red rust of iron, half a pound; muriatic acid, three pounds; alcohol, three pounds and four ounces. Pour the acid on the carbonate of iron in a glass vessel; shake the mixture now and then, during three days. Set it by until the fæces have subsided, and then pour off the liquor; evaporate this to sixteen ounces, and when cold add to it the alcohol. This is one of the most eligible forms of iron. The dose is from ten to twenty drops in water.

TINCTURE OF OPIUM—Laudanum.—See *Laudanum*.

TINCTURE OF QUININE.—Put one drachm of quinine into half a pint of new rum. It dissolves immediately, and is ready for use. The dose is a tea-spoonful. This tincture almost entirely supersedes the use of the tincture of bark.

TINCTURE OF RHUBARB—Sweet Tincture of Rhubarb.—Take of rhubarb, in coarse powder, two ounces; root of liquorice, bruised, one ounce; anise-seeds, bruised, one ounce; double refined sugar, in powder, two ounces; proof spirit, two pounds and a half. Let them stand for a week, and strain the liquor through linen.

This is an excellent medicine in the bowel complaints of children, as well as of grown people. The dose for an adult is a table-spoonful; for a child, a tea-spoonful.

TINCTURE OF SQUILL.—Put four ounces of the squill, dried and bruised, into two pounds of proof spirit; let it stand for a week, and pour off the liquor. The dose is from twenty to sixty drops. Vinegar is commonly used instead of proof spirit. The syrup of squill is made from the vinegar.

TINEA CAPITIS—The Scald-head.—See *Scald-head*.

TOBACCO.—The tobacco plant is a native of our country. An inferior kind of it grows in New England, but the best quality is

raised in the Southern States. It is a powerful sedative, emetic, cathartic, and diuretic. In full doses it is a perspirative.

Not more than a tea-spoonful of the tea or infusion should be given at a time. It has been used with success in the dropsy, stoppage of the water, asthma, painful fits of gravel and stone in the bladder, colic, iliac passion, hernia, and constipation. In most of these cases it is used by way of injection into the bowels. For this purpose, half a drachm of tobacco is steeped in a pint of water, and introduced, blood warm, with a syringe. It soon reduces the pulse, relaxes the muscles and skin, and operates powerfully upon the bowels and kidneys. A larger quantity than half a drachm should not be employed, even in this way. The prostration of strength, and of the powers of life, which it produces in a large dose, are sometimes frightful. Even a plaster made of yellow snuff and hog's lard, applied to the skin of a child, will often produce nausea, vomiting, and reduction of the pulse. A medicine which operates so powerfully, merely by an application to the surface, needs to be used with caution. In cases of croup, asthma, and violent lung and throat affections, the snuff plaster is, however, an excellent remedy.

The active property of tobacco consists of an essential oil, a few drops of which cause instant death.

But, notwithstanding the poisonous effects of this plant, it is in daily use as a *sedative* and *anodyne*. Does the human race need such an incessant carminative? Do the vital powers require this constant depression? Must the flame of life be daily extinguished to a certain extent to support existence? Is not human life supportable without it? Must a stream of smoke, of steam, and of nauseous saliva from the mouth be continually kept up to get through the day with comfort?

TONIC.—Medicines which give strength to the system, such as quinine, bark, elixir vitriol, rust of iron, wine, and bitters in general.

TOOTHACHE—*Odontalgia*.—One of the most ornamental features of personal beauty is a good set of teeth; and no pains should be spared to preserve them. When a pain is felt in a tooth, great care should be taken to ascertain whether the tooth is defective or rotten. The teeth will sometimes ache when they are sound, either from an inflammation of the nerve, or of the membranous covering of the jaw and socket. In this case, it is best to cure the pain without extracting the tooth. Such is the value of the teeth, in the mastication of the food, and in articulation, that much pain should be suffered, and no reasonable expense spared, to repair them. The toothache is often stopped by filling the tooth with tinfoil or gold leaf.

The art of dentistry has now become so common, and the price of repairing the teeth so moderate, that it is within the means of most people, either to have their teeth filled as soon as they manifest any defect, or replaced with artificial ones where they are entirely decayed. The filling with tinfoil answers the purpose

in most cases, and the work may be done very cheap. But some teeth are so decayed that they cannot be filled or repaired. They must either be cured by other means or be drawn. Many teeth are drawn unnecessarily, or long before they need to be removed.

The toothache proceeds from an inflammation of the teeth, or the parts with which they are connected. This inflammation can be often resolved or dispersed without the extraction of the teeth. The means are precisely those of reducing any other inflammation. The toothache can sometimes be driven away by a dose of salts or aloes. In other instances, it can be relieved by a profuse sweat produced by hot herb teas, such as pennyroyal, catnip, or thoroughwort. A sweat produced by eight grains of Dover's powder, given every four hours, will often cure the toothache.

With the exception of extraction, the surest remedy for the toothache is a dose of laudanum or opium. Half a tea-spoonful of laudanum, or of morphine of the same strength, will in general stop the pain in any case. A child must take less in proportion to its age. Ten drops will be enough for a child of seven or eight years of age; and fifteen drops for one from eight to twelve. Twenty drops may be taken by a youth from twelve to sixteen years old, in a severe toothache. In a severe toothache we have been in the habit, for many years, of giving opium in a pill of two or three grains. In extreme cases we have given a pill of three grains, and in more moderate cases one or two grains. All local remedies compared with this are ineffectual and uncertain. This remedy will sometimes fail, but we believe it to be the most certain which we possess. In some cases the pill must be repeated in the course of three or four hours.

Various medicines are applied to the rotten cavity of the tooth, the best of which are laudanum, strong spirits of camphor, the cajaput oil, the powder of alum, the spirits of turpentine, ether, red pepper, a drop or two of the elixir vitriol, the oil of cloves, and the smoke of grated nutmeg drawn through a pipe.

The creosote is a late remedy, and appears to possess more efficacy than either of the others, unless it be opium, and is probably more effectual than even this, applied locally.

Mustard and ginger poultices, the tincture of red pepper, and blisters applied externally, are often found serviceable, and sometimes effectual. Leeches are more efficacious than either.

The toothache is often produced by colds, and, in many cases, appears to be an epidemic arising from the state of the atmosphere; but it seems to us to be oftener produced by sucking, picking, and irritating the defective teeth. If a decayed tooth is let entirely alone, neither used in chewing the food, nor sucked, picked, nor irritated in any other way, it will seldom become inflamed and sore. This we have observed a thousand times. A slight pain produces some little nervousness, which disposes everybody to feel of or to work upon the tooth, which soon brings on a high

degree of soreness and inflammation. A little resolution and self-command, in this respect, will often save many hours of severe torment.

When other means fail, and the pain, soreness, and inflammation continue or increase, the diseased tooth or teeth must be drawn. For this purpose, the straight forceps are the best, as the direction in which the tooth is drawn saves the socket from being injured. No one should undertake to extract a tooth who cannot work deliberately and carefully. Timidity, hurry, and confusion, almost invariably produce mischief. The operator should take the same time to draw a tooth that he would to do any other mechanical piece of work which requires the same accuracy or nicety.

To stop the hemorrhage or bleeding which sometimes follows the extraction of a tooth, there is nothing better than eight or ten drops of the tincture of catechu applied upon a dossil of lint. If the bleeding is profuse, a hard ball of lint must be pressed upon the spot from which the blood issues, and the pressure kept up as long as there is any disposition to bleed.

To preserve the teeth from decay, there is nothing better than the Peruvian bark, used as a powder. The teeth and gums should be rubbed with this substance every morning. It hardens both the gums and the teeth, and keeps them from all impurity. All gritty substances should be avoided, lest the enamel of the teeth be worn off. The powdered charcoal makes a very good dentifrice.

TRACHEA—The Windpipe.—Its upper part is called the larynx; its lower part, which divides into two branches, is called the bronchia.

TREMBLING—Tremor.—This affection of the nerves and muscles is somewhat different from the shaking palsy. It affects young people, and is only produced by particular causes and at particular times. It is a peculiar weakness of the nervous system, induced by severe sickness or disease; by intemperance in eating, drinking, and venery; by the use of opium, and, sometimes, an immoderate use of tea.

This trembling of the muscles shows itself the most manifestly under the passions of fear and anger; in the presence of strangers; and in situations where presence of mind is required. We knew one individual who was invariably seized with a fit of trembling whenever a stranger entered his house. The trembling resembled that of an ague fit in the commencement of an intermittent fever, and would last him for fifteen minutes or half an hour. The health of this person was otherwise good, and his mind uncommonly sound. He lived a retired life, and was advanced in age when he died. He was a laboring man, and was not reputed intemperate.

In this disease, recreation is peculiarly necessary. Diversion of any kind, which is not attended with dissipation, is beneficial. Excessive labor, and indulgence in any of the animal pleasures, must be avoided. A course of the quinine, and of iron in some

form or other, would be likely to strengthen the nerves. Some acquaintance with the world, and an occasional mixture with the crowd, would be attended with no evil. The chalybeate spring-waters, and the round of diversions which watering-places afford, promise as fair a prospect of recovery as any which we can recommend.

TUBERCLE.—A small, round swelling or tumor. Scrofulous swellings are an example of tubercles.

TUMOR.—A preternatural eminence developed in any part of the body. Some consist of flesh; others, of fat; some of a fluid, like honey, contained in a bag or sac; others, of a cheese-like substance. Fatty tumors or wens have been removed from the body, weighing forty pounds. An instance of encysted tumors is recorded and well authenticated, which reached from the socket of the eye down to the thigh. It was filled with a fluid matter, and hung down in front of the body, like a satchel or bag. The neck of it was slender, but the tumor gradually enlarged as it descended.

TUMERIC—*Curcuma Longa.*—The root of this plant is the part used as medicine. It is a native of India, and is perennial. The dried root is in round, slightly twisted, thick pieces. It is hard, compact, and, internally, of a deep orange-yellow. It has an aromatic smell, and a warm, bitterish taste. It tinges the spit-
tle yellow, and affords an orange-yellow powder. It acts as a stimulant, somewhat like ginger, and tinges the urine of a deep-yellow color. It is employed in diseases of the liver, jaundice, dropsy, intermittent fever, and scurvy. It was formerly in much use, but since it has been used as a dye-stuff, it is less used as a medicine.

TURPENTINE.—The turpentine is a balsam, or liquid resin, procured from several kinds of pine. From this balsam the oil or spirit of turpentine is obtained by distillation with water. The spirit of turpentine chiefly in use among us is obtained from the pitch-pine of the Southern States. The volatile oil is the medicinal part. In the dose of ten or twenty drops, the spirit of turpentine acts strongly upon the kidneys, producing a plentiful flow of urine. In the dose of one or two ounces, it operates powerfully upon the bowels, purging them forcibly. It is an excellent remedy to dislodge and expel worms. For this purpose, it may be given to children in doses of from one to four tea-spoonfuls, in molasses and water or honey. In the cure of gleet, but few if any remedies can be placed before it.

In cases of colic and strangulated hernia, it is one of the most certain and effectual remedies which has ever been tried. To effect a passage in these cases, it is often given to the extent of a wine-glassful at a time, and repeated at intervals of an hour or two, until the end is accomplished. It will often overcome the most obstinate obstructions and relieve the hernia. Perhaps the safest way of using it is to mix it with an equal portion of castor

oil, and to take a table-spoonful every hour, or half hour, until it operates.

In any obstruction or stoppage of the water, it is often attended with speedy relief. It penetrates quick, and diffuses itself over the whole system. In bleeding from the lungs, ten or fifteen drops on sugar have been found of great service. It has also often been inhaled in the same complaint. Chronic rheumatism has been cured by the use of it. Its nature appears to be healing and stimulating. It is sometimes used as a warming external application to swelled joints and other tumors,

TURPETH MINERAL—Sub-sulphate of Quicksilver.—Turpeth mineral is a yellow powder. It is formed by the union of mercury with oil of vitriol. Its medicinal properties are those of a powerful emetic and sialagogue, or promoter of the saliva. It has been chiefly used to cure the clap, venereal, and swelled testicles. The vomiting which it excites operates favorably in reducing the inflammation and swelling, while the salivation completes the cure. It has, in some instances, been employed in the reduction and dispersion of glandular swellings, and in the cure of croup. The ordinary dose for an emetic is from two to six grains. In the dose of a grain, it operates as an alterative and perspirative.

TYMPANITES—Tympany.—See *Air Swellings*.

TYPHOID FEVER.—Typhoid is a term which has recently been adopted to designate the prevailing fever of this climate. It is an adjective which means resembling or partaking of the nature of typhus. The fever which has ever been most prevalent in New England has been called slow fever, long fever, continued fever, typhus, nervous, and sometimes, slow bilious fever, according to the predominant symptoms of the prevailing epidemic, or the duration of the particular case. A fever is a condition of the system, that, in the general, is easily recognized and distinguishable from most other affections; but in the particulars it is ever varying; no two cases or epidemics ever occurring, that may not be distinguished from each other, by some peculiarity,—either by the predominance or absence of some symptom or class of symptoms.

The different grades or types of fever run into each other by such insensible degrees, and are so lost in each other, that it is impossible to determine where one ends and another begins; if we assume the typhus or putrid malignant fever as one extreme, and the highly inflammatory, —synocha,—as the other, we may observe every degree and shade of type between them, linking the two extremes together by undistinguishable grades.

In the interval between these two extremes occurs the grade of fever, which, by common consent, is now called typhoid fever; approximating more or less nearly to the one or the other extreme, according as the particular case or epidemic may be influenced by the season or other causes.

Whether typhoid fever is, or is not, a distinct species of fever, which can be distinguished from every other by constant and

characteristic phenomena, appears very problematical, and is a matter of very little practical importance, as no judicious and discriminating physician ever thinks of treating a disease by its name, but adapts the remedies to the nature of the individual case. When generally considered, names of diseases afford but little aid to the physician, and in fevers, particularly, they often mislead, and are not an infrequent source of error and maltreatment.

Typhoid fever is the prevailing fever in Europe, as well as in America, and is undoubtedly coëxtensive with the temperate zone throughout the world, presenting everywhere, as far as we are able to learn, the same general characters.

The causes of this fever are unknown. As, however, it often, perhaps generally, prevails epidemically, it is probably dependent upon some peculiar condition of the atmosphere, or exhalations from the earth, the precise nature of which eludes investigation. These exhalations, or miasms, may be the product of a decomposition of vegetable matter, acted upon by the summer's sun or autumnal rains. Whether this disease is ever produced by contagion, or not, is a disputed point among the best authorities. A somewhat extensive observation, however, has led us to doubt its ever being produced in this manner, notwithstanding the opinion of some eminent men to the contrary.

Adults under forty-five years of age are more obnoxious to this disease than very young children, or persons very advanced in age,—a large proportion of cases occurring between the fifteenth and thirtieth year.

Persons who have once had this disease are rendered less susceptible, if not,—as some eminent physicians suppose,—perfectly secured against future attacks. A removal from one country or part of a country to another seems to be a predisposing cause of this disease. We have often observed that emigrants are more frequently attacked with this fever the first year of their residence in the country, and particularly if they arrive during the season at which this fever is prevalent; and with them it is fatal in a larger proportion of cases than with those who have become acclimated.

This kind of fever may prevail at any season of the year, but is most frequently epidemic during the autumnal months. It is not unusual for an epidemic to begin in the course of the summer, and become more prevalent as the season advances, until late in the fall; during this time, considerable changes in the character of the fever often take place,—the cases occurring in the latter part of the season scarcely appearing to be identical with those that had preceded them a few weeks or months.

The epidemics of different years differ very much from each other in the particular train of symptoms manifested; and although the general character of the fever may be sufficiently marked, there is no one or more symptoms that may not be different, or even absent, without destroying the identity of the disease.

This fever comes on sometimes suddenly, and at others slowly and insidiously. Where it comes on gradually, it is often difficult to say on what particular day the fever commenced. There will often be several days of slight indisposition, without any very definite complaint; the patient is languid, and disinclined to take exercise, either of body or mind; the appetite is depraved, the perspiration checked, the secretions are generally diminished, and the tongue more or less coated. In sudden attacks there are generally cold chills, and sometimes rigors more or less severe, which are soon followed by pain in the head, back, and limbs, intolerance of light, thirst, loss of appetite, hot, dry skin, urine scanty and very high-colored, redness of cheeks and eyes, sleeplessness, distress at the pit of the stomach, a sense of extreme debility, and disinclination to mental exertion; the pulse is frequent, varying, in cases of medium severity, from ninety to one hundred and twenty in a minute, generally rather small, and slightly hard in the first stage, but becoming softer, and in favorable cases slower, and in unfavorable cases more rapid, as the disease advances. There is often a great fulness of the vessels of the head, particularly a turgescence of the temporal arteries, frequently preceding and accompanying delirium. The tongue, though sometimes natural in appearance, is generally coated with a whitish or brownish coat, with occasionally a clean, red stripe in the centre; or, it is clean, red, dry, and glossy. In those cases which approximate more closely to typhus, the tongue is of a dark-red color, cracked, resembling a piece of raw beef, and trembling when protruded; or, it is covered with a dark-brown or blackish coat, which often becomes dry, producing stiffness and insensibility of the organ. The teeth are incrustated with a dark-colored sordes, giving the mouth a disgusting appearance.

The respiration is hurried, and there is frequently a short, dry cough, even when the lungs are not positively diseased. Pains, soreness upon pressure, and distention of the stomach and bowels, are frequent attendants. There is occasionally sickness of the stomach, and a diarrhœa is one of the most constant symptoms; in some epidemics that we have witnessed, there have been but few cases that were not attended with diarrhœa, which came with the fever, and continued, in a greater or less degree, until after the crisis, when it subsided spontaneously. Deafness, a ringing, roaring, or buzzing noise in the ears, and other deranged sensations, are not unusual, even in mild cases. The body emaciates rapidly, the muscles are rigid, the eye dull and vacant, the countenance peculiar, and there emanates from the body an indescribable odor, which is readily recognized by those who are accustomed to the disease. It is not unusual, in the course of the disease, for bleedings from the nose to take place; and sometimes large quantities of black blood are discharged from the bowels, which, in some rare instances, prove fatal in a few days. An eruption is sometimes observed upon the abdomen and other parts of the body.

In severe cases, delirium, especially during the night, is common, and as the disease advances, stupor and insensibility frequently supervene.

The lungs, in some cases, are affected with a peculiar inflammation or irritation, producing a hard cough, and, not unfrequently, an expectoration of dark-colored or bloody sputa. Like the diarrhœa, this affection of the lungs seems to be dependent upon the fever, and subsides with it. We believe this affection is often mistaken for typhoid pneumonia, and unnecessarily severe remedies employed for its removal.

The heat of the skin is very unequal, the head, or some part of the body, being at times extremely hot and dry, while the extremities and other parts of the body are comparatively cool. Partial sweats are also frequently observed, which have no tendency to mitigate the disease.

The length of time that typhoid fever occupies in running its course varies somewhat in different cases, or different seasons. It rarely terminates in less than fourteen days, or exceeds forty. Judging from our own observations, we should say that the time at which it most frequently forms a crisis, or begins to decline, is about the twenty-first day; and that cases occurring early in the season, during the hot weather, often fall short of this time several days or a week; and as the season becomes advanced, the disease is frequently protracted to four weeks.

The percentage upon the mortality of this disease is, upon the whole, not very great, but varies very much in different epidemics. The pulse becoming slow and full, the tongue clean, pale, and moist, the heat of the skin equal and natural, a universal perspiration, the return of quiet sleep, the appetite returning, a subsidence of the diarrhœa and other particular affections, and an improved expression of countenance, indicate a favorable termination. On the contrary, the pulse becoming very rapid, and small, or irregular, the teeth and mouth covered with thick sordes, and the tongue black, constant or low muttering delirium, great stupor or complete insensibility, twitching of the tendons, sterterous or loud, rough breathing, involuntary discharges of the fæces and urine, a vacant stare, and death-like countenance, indicate great danger, or most certainly forebode a fatal termination.

Treatment.—We believe typhoid fever to be an idiopathic disease of the general system, and not, as some have supposed, symptomatic of local disease; and that the local diseases which occur during the progress of the fever, among which are congestion of the brain, of the lungs, and inflammation of the mucous coat and glands of the small intestines, causing tenderness of the abdomen, diarrhœa, and sometimes even perforation, and sudden death, are occasioned by a greater susceptibility or predisposition to disease in those organs which are most affected, and that the treatment should be regulated upon this principle. When this fever is fixed upon the system, or, as it is usually expressed, *seated*, it is extremely doubtful whether it is ever broken up or arrested in its progress,

until it has run its regular course, or certain changes, the nature of which is not clearly understood, have been effected in the system; all powerful remedies, with a view of effecting this object, are therefore not only useless, but are liable to do positive injury.

When a person supposes himself attacked with this fever, he should avoid all violent or fatiguing exercise of body or mind, should abstain from solid food, stimulating drinks, and confine himself, if possible, to a retired, well ventilated apartment, and a straw bed or mattress; the feet and legs should be frequently bathed in warm water, the body sponged with tepid or moderately cold water, and the head be kept cool by the frequent or even constant application of cold water, vinegar, or spirit and water; the hair should be short and the clothes light; the air should be freely admitted into the room, and the greatest attention should be paid to cleanliness; the body linen and bed-clothes should be frequently changed, the bed aired, and all unnecessary furniture removed from the room; the drinks should consist of balm or flax-seed tea, thin gruel, rice or gum water, or lemonade; the bowels should be moved with a mild cathartic of castor-oil, Rochelle powders, or rhubarb and magnesia; if there be sickness or oppression at the stomach, an emetic of ipecac. will be serviceable; the pain in the head, back, or other parts of the system, may be relieved by the application of hot mustard poultices, either over the seat of the pain or to the extremities, and the use of perspirative drinks.

Should the attack be severe, the pulse hard and full, the pain in the head and intolerance of light excessive, or symptoms indicating inflammation of the lungs or other important organs be present, a moderate quantity of blood should be taken from the arm, and the bleeding be repeated the following day by the application of a sufficient number of leeches to the head or other affected organs, if the symptoms are not decidedly mitigated. The earlier bleeding is practised after the hot stage of the fever comes on, the more likely will it be to prove serviceable; and the application of a few leeches may be repeated a number of times, should the urgency of the case demand. These means should be followed by the nitrate of potash, in doses of about eight grains, combined with from two to four grains of the pulvis antimonialis, or James' powder, every three or four hours, and a liberal use of soda-powders.

In the first stage of the fever, while the decidedly inflammatory symptoms continue, the sal nitre, or sal prunelle, combined with some of the preparations of antimony or ipecac., we deem decidedly preferable to the spirits of nitre, which is frequently given in these cases. But as the disease advances, the spirits of nitre, or spirits of mindererus, (Liq. Acet. Ammon.,) will be found the most suitable remedies. During the whole course of the disease, the bowels should be moved every two or three days with a mild cathartic; morbid heat should be subdued and equalized by frequently sponging with tepid water, and the application of cold water to the head, should it be necessary; the patient

should be liberally supplied with cold water, lemonade, soda-water, and bland nutritious drinks. All excitement should be avoided; no more company should be admitted to see the patient than is absolutely necessary, and the most perfect rest and quietude enjoined.

Should there be watchfulness, delirium, or other disturbances of the nervous system, from two to four grains of gum camphor, combined with from six to eight grains of the nitrate of potash, may be given every four hours with advantage. We have seldom seen this remedy fail in quieting the nervous symptoms and producing rest; should it not, however, produce the desired effect, the lactucarium, an infusion of poppy-heads, the skullcap, or hops, may be tried with propriety. Sometimes a ten-grain dose of Dover's powder at night will have a happy effect, though, as a general rule, opiates are inappropriate.

In those cases in which symptoms of lung affection predominate, the sal nitre, spirits of mindererus, or spirits Nit. Dulc., should be combined with small doses of ipecac., syrup of squills, decoction of Seneca root, or lac ammoniac. A few leeches should be applied over the chest in the early stage of the disease; but in the middle or last stage, blisters over the seat of the affection will be preferable.

It has been stated that diarrhœa is a very frequent attendant upon this fever. When it is severe and tends to produce exhaustion something will be required to be done to mitigate it; for this purpose, moderate doses of calcined magnesia and pulverized rhubarb are the best remedy. Tincture catechu, rhatany, the raspberry leaf tea, and other mild astringents, may be given, and in extreme cases a few drops of laudanum, or a small pill of opium, will be indispensable.

In the last stage of the disease there will sometimes be stupor, more or less complete insensibility, attended with all the symptoms of typhus or putrid fever; under these circumstances camphor, carbonate of ammonia, wine, brandy, the mineral acids, or other tonics and stimulants, must be put in requisition, according to circumstances. Cold stimulating lotions should be applied to the head, mustard draughts to the feet, and blisters to the legs.

When it is considered how exceedingly varied this disease is in different individuals and epidemics, and under different circumstances, it will readily be perceived that no general plan of treatment can be laid down that will apply to all cases; but, on the contrary, that the success of all modes of treatment will depend upon a nice adaptation of remedies to the symptoms and circumstances of each individual case. Mild cases require but little or no medicine, and may be trusted principally to the restorative powers of the system; but in severe cases, the services of a competent physician, to watch the progress of the disease, and to adapt the remedies to the indications of the case, should never be dispensed with.

TYPHUS FEVER—Typhus Gravior—Putrid Fever.—The

typhus fever in our country is a very rare disease. The common slow fever of our climate, often called the mild typhus, in seasons when it is very prevalent and mortal, is frequently mistaken for it. Perhaps the continued or slow fever may sometimes resemble it, and require a similar treatment; but we are satisfied that the true typhus gravior fever is a very rare occurrence in New England. It has probably not prevailed in New England more than two or three times in thirty years. It has usually appeared in the coldest season of the year; in the dead of winter, or late in the fall, though not always. It is generally known in this region under the name of the spotted fever. This name has been given to it on account of the dark-purple spots which, in malignant cases, cover the whole surface of the body. It has oftener visited the country towns than the cities. In our jails and hospitals,—the ordinary seats of it in Europe,—it has rarely, if ever, occurred.

The apprehension of people, therefore, need hardly ever be excited from the danger of being affected with the typhus fever. When the typhus fever does occur, its symptoms are generally distinct enough from the symptoms of other fevers, to determine its real nature. At the first onset of typhus fever, there is an amazing loss of strength, and dejection of the spirits; a great sense of weariness; heavy, deep pains in the head and back; dry, parched tongue; beating of the temporal arteries; trembling of the muscles, and a universal feeling of cold. The eyes are dull and heavy, the urine pale, and the pulse small, hard, and quick, sometimes unequal, beating from 100 to 130 times in a minute. The sensation of a deep load and a dull pain often affect the pit of the stomach. But the leading symptom is stupor,—a deep, heavy drowsiness.

In the progress of this disease, the tongue, mouth, teeth, and even the lips, will be covered with a black, thick coat. Muttering, moaning, and delirium, will arise as the disease advances, and the thirst and heat of the skin increase until symptoms of putrefaction appear. At this period, the breath becomes offensive, and bleeding will often take place spontaneously from the nose, mouth, and gums; the urine and stools will pass off involuntarily, and dark-purple spots appear on the skin. Finally, the pulse sinks, hiccoughs come on, and the patient soon dies.

The typhus fever, in this climate, generally runs from fourteen to thirty days. It is deemed to be contagious, and to originate from the decomposition of vegetable and animal matter, or a peculiar miasm or effluvia emanating from the earth. The immediate removal of people to a pure air, who are seized with this disease, is of the utmost importance. Ships, jails, hospitals, and barracks, are often the theatres of this disease. The congregation of so many different breaths, and the accumulation of so many different secretions and excretions, can hardly fail to generate contagions, unless the greatest precaution and care are taken to have a free circulation of air, and to remove all offensive matter. This disease has often been noticed to arise among the poor, in low,

crowded, ill-ventilated houses or huts, where a want of air, food, and cleanliness conjoin to produce the disease. In such cases, the first thing which their neighbors in better circumstances should do, is to remove them to an airy situation, to supply the well ones with food, and the sick with clean, comfortable bedding. Good fires, which dry the air without overheating the rooms, have been observed to moderate and check the spread of the disease. The muriate of soda or lime, dissolved in a little water and placed under the bed of the sick, has great power in preventing the spread of the disease and neutralizing the contagion. Burned sugar or vinegar has something of the same tendency. Where bodies have been dissected, signs of inflammations of the brain, stomach, and bowels almost always appear.

From the oppression of the brain and the disorder of the senses in this disease, many have supposed it to be an affection of the nervous system, and have styled it a nervous fever. This may or may not be; we have chiefly to do with its history and treatment.

Domestic Remedies.—If the attack comes on with a hot, dry skin, quick pulse, and pain in the head, after being placed in a comfortable bed and airy room, the patient should be washed all over with cold water, either by the use of a napkin or sponge, and the head kept constantly bathed. If sickness at the stomach be present, a gentle emetic of ipecac. should be given, and a plenty of warm water administered during its operation. If there should be no great disturbance of the stomach, a dose of physic should be given first. This may be either two table-spoonfuls of castor-oil, two tea-spoonfuls of calcined magnesia, five or six butternut pills, two or three tea-cupfuls of thorough-wort tea given at an interval of fifteen minutes each, or ten grains of calomel and as much jalap. The effusion of cold water should be repeated every day, and where the heat and thirst are great, four or six times a day. After the fever has been established for several days, the skin may be bathed in tepid water, as cold cannot be so well borne.

The effervescing draughts are peculiarly applicable in this disease. The half or a quarter of a soda powder, in a wine-glass of water, may be given every half hour, if the thirst should demand it. The acetate of ammonia, made by mixing a tea-spoonful of lemon-juice or vinegar with half a tea-spoonful of carbonate of ammonia, may be taken in the same way. Sweating medicines are not commonly much used in this disease.

The drinks should be cold water, balm tea, lemonade, tamarind-water, or a sour drink made of elixir vitriol and water, fifteen drops to a tumbler of water, and swallowed at intervals.

Mustard poultices may be applied to the stomach or head when either of these organs is unduly affected. The nourishment should consist of gruel, rice-water, chicken broth, milk and water, and arrow-root.

Professional Remedies.—Blood-letting is deemed a doubtful

measure in the genuine typhus; and antimonial medicines are in no greater repute. Gentle cathartics every other day, cold ablu-tion, the mineral acids, particularly the muriatic acid, effervescing draughts, a moderate quantity of wine, camphor, especially the camphor julep, and the quinine, are the principal means relied upon. Blisters are accounted doubtful remedies. Where there is great sleeplessness, an opiate of twenty drops of laudanum, or of ten grains of the Dover's powder, should be given at night.

When an abatement of the feverish symptoms has taken place, the quinine, in one grain doses, should be commenced and given every three or four hours. If the quinine should not agree with the stomach, the columbo may be given in its stead.

There is no more favorable symptom in this disease than the return of sleep. An abatement of the heat and a gentle moisture upon the skin are also favorable indications. The flow of the saliva, the cleaning of the tongue and mouth, and the moderation of the pulse, generally precede the turn of the fever and entire recovery from the disease.

TYPHUS MITIOR—Mild Typhus.—The symptom which distinguishes both typhus gravior and typhus mitior from inflammatory fevers is stupor,—a heavy, drowsy, lethargic state of the brain. In the typhus gravior, the stupid, comatose state is more remarkable than in the mild typhus. Indeed, this fever derives its name from a Greek word which signifies stupor. Therefore, in deciding upon the nature of a fever, it will be proper to observe whether this symptom is present and to what degree. This stupor should not be confounded with delirium, which is liable to occur in all fevers. The stupor may exist with or without delirium.

Petechiæ, or purple spots which resemble flea-bites, further distinguish typhus from the common continued and the inflammatory fever. A third symptom, though less specific, is the smallness of the pulse in typhus. In the common continued and inflammatory fevers the pulse is full.

An attack of the typhus mitior commonly steals on by degrees. The patient is often indisposed for some days before all the symptoms disclose themselves. Unlike the continued and inflammatory fevers, there is no redness of the face, or fulness of the blood-vessels of the head; the face is pale and sunk; there is some chilliness, but not amounting to rigors, and this is not followed by a hot fit, as in inflammatory fever; the patient loathes food, feels dejected, sick at the stomach, or vomits, sighs, faints on trying to sit up, and in the course of a few days breathes with difficulty; the strength departs; the head aches; the pupils of the eyes become dilated; the muscles tremble; the tongue is dry and covered with a dark-brown fur; the pulse is quick, small, and low; the teeth are coated with a dark-brown crust; the palms of the hands are hot, while the back of the hands and the forehead are covered with a cold, clammy sweat. Stupor, and a low, muttering delirium are constant symptoms. As the fever progresses the patient

constantly picks at the bed-clothes. As evening commences, he is commonly worse, and more comfortable in the morning. In some cases, this order is reversed, and the patient is better in the evening and worse in the morning. In other cases, there will be a clean, moist tongue, with violent headache and restlessness, and the reverse. At one time, profuse sweats will occur, and at another the skin will be comparatively dry. The urine is commonly pale and watery. Purging and sweating, to a greater or less extent, are common events, and rapidly exhaust the strength.

A great discharge of saliva is a common occurrence, which is often so sticky and tough as to clog up the throat, and impede the swallowing and breathing.

If it terminate in recovery, the disease goes off in about two weeks, but it often lasts four. Frequently, when it runs on for four or five weeks, it will become putrid, and manifest all the symptoms of typhus gravior. The two diseases are of the same nature, and only appear to differ in the degree of severity.

Both varieties are thought to be produced by contagion.

The approach of death is foretold by sinking of the pulse, involuntary discharges, picking at the bed-clothes, cold, clammy sweats, starting of the tendons, and hiccoughs.

Where bodies have been dissected, the blood and other fluids have been found in a dissolved state, the flesh soft and flabby, a sanious matter contained in the chest, abdomen, and other cavities, a serous fluid in the brain, and signs of inflammation and engorgement in the lungs, heart, and bowels.

In cold weather, this fever sometimes attends inflammations of the lungs, occasioning a disease called pneumonia typhoides, a malignant kind of pleurisy or peripneumony. In our climate this is a frequent disease, especially among old people, and in time of epidemic influenzas. Indeed, the epidemic itself will often assume this type.

Domestic Remedies.—In the commencement of typhus mitior, if there should be sickness at the stomach, or vomiting, an emetic of ipecac. will be the best thing to be given. In case the patient is costive, a small dose of salts or other mild physic will be proper as soon as the emetic has well operated. In some cases, the bowels only will require relief. Bathing the body with cold water is a safe and powerful means of relief; if it does not entirely subdue the fever, it will lighten most wonderfully the weight of the disease, and enable the system to go through with it with more certainty and comfort. The refreshment which it affords, and the rest it procures, should induce the friends of the sick to apply this remedy with constancy and perseverance. It is most effectual in the beginning of the disease, but may be employed in any stage where the skin is warm and dry. The body of the patient should be washed all over as many as two or three times a day, and oftener if the fever is high. This may be done with a cloth or a sponge. Water may be poured on the head and face for two or three minutes at a time, or even upon the whole body. The

body, however, should never be bathed when there is any degree of chilliness or a general sweat.

The best time to bathe the patient is when there is an increase of heat, thirst, and restlessness. The feet may often be bathed with warm water, and the head with ether or cold vinegar and water.

In the progress of the disease, wine whey should be given. The diet should be rice-water, bread-water, arrow-root, and milk and water.

Professional Remedies.—Bleeding is inadmissible in mild, as in putrid typhus. Antimonial medicines are scarcely less proper. Even blisters are doubtful remedies, and often attended with no beneficial results. The system needs no reducing; it merely requires relief and support. Perspiration should be induced by the acetate of ammonia, muriate of ammonia, camphor, sweet spirits of nitre, chloric ether, and other stimulating sudorifics.

If the patient gets but little sleep, ten grains of Dover's powder, mixed with four or five grains of camphor, should be given early in the evening, if the fever is not too high, and repeated, if necessary, in three hours. If a severe purging takes place, it must be checked with logwood tea, kino, and other astringents.

The strength in this fever must be supported with wine. Half a pint or a pint a day is often required to enable the patient to survive the disease. Madeira, or Sicily Madeira, is the most suitable. Port is the next best. It should always be taken with water or in the form of wine whey. If it produces sleep, quietude, and refreshment, we may be sure that it is required.

In addition to wine, quinine, cascarilla and columbo are given to support the strength, and to keep up the tone of the vital powers.

The mineral acids, elixir vitriol, spirit of sea-salt, and aqua fortis, in a diluted state, are given. They are administered in the form of sour drinks. If this fever degenerates into the putrid form, with purple spots upon the skin, fetid breath, bleeding from the mouth, nose, or ears, inability to articulate, excessive stupor, and trembling of the muscles, with a small, low pulse, it will require the use of the same remedies as the typhus gravior.

As this disease is communicated by contagion, every effort must be made to prevent the spread of it. The contagion appears to affect only those who are obliged to be very near the sick. It is diffused in the air, but to no great extent. It is thought never to extend so far as to affect people in an adjoining street, or even in an adjoining house or room. It is remarked, that people living in low, small, damp rooms are most liable to it. It also prevails in camps, ships, and poor-houses, where a great many people are crowded together.

The first thing to be done in this fever is to place the patient in a large, clean, airy room; and, where many are taken sick at the same time and place, they should be scattered as wide apart as possible, in order to neutralize the contagion by its wide disper-

sion in the air. Fresh, pure air, cleanliness, and the use of the chlorides of lime or soda about the beds of the sick, will be pretty sure to destroy the contagion. Dirt, filth, and a damp, stagnant air greatly increase the virulence of the contagion, and endanger the lives of the attendants. Those who attend the sick of typhus fever should be often in the open air, and not confine themselves closely to the bedside of the patient. If nurses and attendants were properly relieved from their duties in this, as well as in other contagious diseases, we should hear of few instances of taking diseases in this way. The windows and doors of the sick-room, in warm weather, should be thrown wide open; and, in cold weather, as much air admitted as can be done consistently with a proper temperature. The clothes of the sick should be often changed, and all impure vessels instantly removed from the room; for it is probable that where the patient goes dirty, unaired, and uncleansed, he every day receives a new charge of the contagion from his own body; and a disease, light in the commencement, becomes putrid in its progress, simply from an accumulation of the contagious effluvia.

A want of sufficient food is often the cause of this disease. It is a pestilence which proceeds from famine, and famine sometimes takes place among families in well-fed communities, from extreme, long-continued poverty. The blood and fluids become thin and easily dissolved, and the process of putridity commences. The whole community is most surely deeply interested in closely looking to the temporal wants of its members. By letting a single family go unfed, unhoused, or housed in a low, damp, filthy place, contagion may reach the whole community. Man is an animal, and suffers like any other from a want of sufficient suitable food. In a close, unaired, damp room, his body generates poison, which is exhaled from his lungs and his skin. The open air gives life to the blood and tone to the whole system. The blood should be formed out of wholesome, nourishing food.

U.

ULCERS.—Ulcers are of various kinds, and proceed from various causes. Some ulcers secrete pure pus, and others a watery or sanguineous matter. An ulcer is commonly understood to be an open sore, not very well disposed to heal. Some, indeed, never heal, such as the cancer and some fistulous sores. An ulcer situated in the bones is very slow in healing. Venereal and scorbutic ulcers are often inveterate. Every wound which does not heal by the first intention, or by simply putting the lips of the wound together, and without its suppurating, is an ulcer.

When ulcers on the surface of the body are slow in healing, they must be stimulated by some substance which will eat away

the callous or fungous flesh. For this purpose, calomel, red precipitate, burnt alum, borax, blue vitriol, caustic potash, and the nitrate of silver are used. Some vegetable substances, such as the powdered leaves of savin, the bayberry and the blood-root, have something of the same nature. The powdered blood-root, mixed with calomel, in equal parts, and used as a snuff, is said to have cured the polypus in the nose. Some ulcers are healed by the application of astringents, such as sugar of lead, white vitriol, white-oak bark, creosote, and catechu. In all ulcers, the sides of the cavity should be brought as near together by sticking plaster as possible.

There is nothing better for ulcers in general than to soak them well with warm water. This dilutes the acrid matter and renders it bland. It relaxes the tense and hardened blood-vessels, and resolves that feverish and inflamed state, which prevents their proper action. The matter which ulcers discharge is an unnatural secretion. The injured or disordered vessels perform a new office.

A strong tea made of the narrow dock-root, both taken internally and used as a wash, is an excellent remedy for old ulcers. But a remedy on which great reliance may be placed is the daily use of the lunar caustic. The hardened, horn-like edges, and the proud flesh, should be touched over every morning, and the next morning washed off with a tea of narrow dock. Many prefer the caustic potash, and where this is the case it should be used daily, like the lunar caustic. It is very certain that many ulcers would never heal without the use of these means.

It is important, at the same time, to renew the blood by the use of nutritious and unirritating food, and sometimes wine, quinine, and acids. In general, a vegetable diet is to be preferred, unless the person is obliged to labor, or has been reduced in consequence of a poor, meagre, and unwholesome diet. There is no better diet, perhaps, than pudding and milk, or rice and milk.

The secretion of a confirmed ulcer is poisonous to the contiguous skin, flesh, and tissues. This poisonous ichor must sometimes be neutralized by sprinkling on finely-powdered chalk, charcoal, and magnesia, and by daily soaking the part in warm water. If this is not done, the corrosive matter or ichor will be sure to spread the ulcer to a greater extent.

A drachm of the sugar of lead dissolved in half a pint of water, gradually increased, has in our hands proved the best of all washes to heal old, foul ulcers. Solutions of blue and white vitriol are suitable in some cases. To correct the bad smell, there is nothing so good as charcoal, although the chloride of soda or lime will answer the same intention.—See *Sore Legs*.

ULNA.—One of the bones of the fore-arm. It extends from the wrist to the elbow, where it locks into the humerus or upper bone of the arm, and forms a kind of hinge or pulley. Its mate is the radius.

UREA.—A crystalline salt, obtained from urine. It consists of four-sided prisms, which have a slight pearly lustre. Of all animal substances, urea possesses the most nitrogen in its composition, and the inference has been drawn, that the secretion of urine is designed to abstract the excess of nitrogen from the blood, as the respiration separates the excess of carbon. Nearly one half of this salt is nitrogen. Liebig thinks that urea is formed from the metamorphosed tissues of the body.

In a strong heat, it melts and is partly sublimed. Its smell is peculiar, but not urinous. In water it is very soluble; in alcohol less so. It unites with most of the metallic oxides and forms new compounds. Uric acid is a substance quite distinct from urea.

Urea, when analyzed, is resolved into ten parts of hydrogen, nineteen parts of carbon, twenty-six parts of oxygen, and forty-three parts of azote or nitrogen. Hence, it will be perceived, that it contains a greater amount of nitrogen than any other animal substance. Albumen, fibrine, and caseine, contain about fifteen or eighteen parts of nitrogen, and the flesh and blood about the same proportion. Hence, the conclusion, that the use of the urine was to carry off the superfluous azote from the animal system. On the supposition that hydrogen, oxygen, carbon, and nitrogen are the true and only elementary principles of flesh and blood, the inference is a very legitimate one.

URETERS.—The two ducts or vessels which convey the urine from the kidneys to the bladder. They are about the size of a goose-quill, and enter, one on each side of the bladder. The urine flows, drop by drop, from the kidneys into the ureters.

URETHRA.—This is the passage which conducts the urine from the bladder out of the body.

URINE.—The urine is secreted by the kidneys. It is the most plentiful secretion in the body, and contains the greatest variety of salts, the principal of which are urea, muriate of soda, common salt, phosphate of ammonia, and muriate of ammonia. It is pretty evident that the substance of the bones passes off by way of the urine. Healthy urine is perfectly transparent and clear when passed, but on standing in a vessel, deposits a reddish-colored sediment.

In the crisis of a fever this sediment is always in greater abundance than in health, but is of the same nature.

The urine is expelled by the contraction of the bladder.

In summer, when the perspiration is abundant, the secretion of urine is smaller; but in winter, when the transpiration by the skin and lungs is less, the amount of urine is greater. In proportion to their size the kidneys secrete more than any other glands in the body. More blood goes to them than to any other organs of equal size, and more secreted fluid comes from them.

URTICARIA—The Nettle Rash.—See *Nettle Rash*.

UTERUS—The Womb.—This organ is situated in the pelvis, between the bladder and rectum. It is in the shape and about the size of a common pear, a little flattened. Its length is about three

inches, its breadth in the middle about two, and at the mouth about one inch. The largest part is called the fundus; the middle, the belly; and the smallest, the cervix or neck. The fundus is the upper part. The cavity of the uterus is small at the entrance, and gradually enlarges to the fundus, where it expands into a triangular chamber, out of which proceed the Fallopian tubes,—two ducts about three inches in length,—which communicate with the ovaria. The internal surface of the womb is corrugated at the entrance, but smooth in the fundus. The womb is abundantly supplied with blood-vessels and nerves, and its walls always preserve the same thickness both in pregnancy and in the virgin state.

The fallopian tubes terminate in a kind of fibrous fringe, called the fimbriæ. The womb is suspended by strong ligaments from the brim of the pelvis; but these often become relaxed, in consequence of general debility and local irritation, when a falling of the uterus takes place.

UVA URSI.—Cranberry, Wild.—See *Cranberry*, *Wild.*

UVULA.—The worm-like termination of the soft palate.

V.

VACCINATION.—This is a very simple operation. If the vaccine matter is taken immediately from the pustule, in a liquid state, it may be inserted in the flesh with a needle or a pin. A little place may be scratched in the thick part of the outside of the arm between the shoulder and the elbow, and the fresh matter rubbed in with the point of a pin or needle. Another method is to lift the skin with the point of a lancet, dip the point into the matter of the ripe pustule, and then insert it under the skin. A third method is to divide a scab into small grains, and to insert one of these under the skin with a needle or lancet.

The most common method at present is to receive the matter upon the points of pieces of quills, which have been split and sharpened for the purpose. In this way the matter may be inserted either in a fresh or a dry state. After the matter has become dried upon the quills, it requires a longer time for it to be absorbed, and the point of the quill upon which the matter is carried must remain in the puncture fifteen minutes or half an hour.

The matter may always be taken as soon as the pustule is formed, which is about the sixth day. The matter is the best between the sixth and the eighth day after vaccination. After the eighth day, the matter begins to lose its virtues, until a scab is formed, which appears to contain all the virtues of the freshest matter. The scab commonly comes off in about eighteen to twenty days. The scab can be moistened with a little warm water, and made into a paste, received on quills or the point of a needle or

lancet, and inserted in the same way as the fluid matter. The paste should be soft and finely mixed. No covering or dressing is necessary in vaccinating. A scab can be kept for a long time by cutting a hole in a piece of beeswax, inserting the scab, and covering it with the piece which has been cut out. In this way the scab is hermetically sealed. If the matter is received on quills, the quills should be inclosed in closely-stopped phials. The matter should be kept in a temperature of about fifty-two. Extreme heat or cold decomposes it.

VAGINA.—The passage to the uterus

VALERIAN—*Valeriana Officinalis*.—This plant grows wild in England, and in the State of Ohio. The root,—the part used in medicine,—consists of numerous small fibres matted together, and attached to one head. It has a strong, not unpleasant odor, a warm, bitter taste, and a brown color. It is given in the form of tea, tincture, and powder.

It is an anodyne and antispasmodic. The valerian tea, in nervous diseases, such as hypochondrism, wakefulness, falling fits, hysterics, St. Vitus' dance, delirium tremens, palpitation of the heart, and hemiplegia, is an efficacious and safe remedy. The common dose of the powdered root is from a scruple to a drachm. The same amount may be taken in the form of tea or tincture. An ounce of the root may be steeped in three gills of water, and a tablespoonful taken every three hours through the day; in bad cases the dose may be doubled.

VALVE.—A small membrane contained within the veins, lymphatics, and other vessels, to prevent the fluids from flowing back. After the blood or other fluid passes the valve, if it returns, the valve closes, as in a suction pump, and keeps the fluid from returning.

VARICOSE VEINS.—The superficial veins, especially those of the legs, are apt to be distended with blood, and to become, in places, swelled into purple bunches. The veins will present here and there little bags of blood. The valves lose their tone, the sides of the veins give way in certain parts, and the blood accumulating, dilates them to such an extent that it sometimes ruptures their coats.

This disorder is occasioned by exhausting labor performed upon the feet, by strains, and by pressure, which stop the blood from ascending to the heart. The affection happens to people of weak, soft, and relaxed muscles and blood-vessels. It is frequently seen in women in child-bearing. At such times the veins will present a series of knots extending from the ankle to the groin, and where the veins run very near the surface, the knots will be of a purple color, looking very much like what are called blood-boils. Indeed, they are of the same nature, but much slower in forming; and for this reason they are not sore or painful. They produce a distress in the limb, but no acute pain.

In pregnancy, the dilated veins may be unloaded by blood-letting. A pint of blood taken from the arm will commonly reduce

them to their ordinary size. The bleeding should be followed by two or three doses of salts, or some other physic, and the legs should be swathed with a wide bandage, which will prevent the sides of the veins from being distended. In most cases, the mere support of a bandage will obviate the whole difficulty. Showering with cold water will strengthen the veins and prevent their swelling. But, in whatever veins the distention happens, moderate, steady, and continued pressure is the safest and surest remedy. Cooling astringent lotions, such as lead-water, alum-water, and a solution of white vitriol, will assist in restoring the lost tone of the veins. Where varicose veins occasion much distress in the limbs, new rum, brandy, laudanum, or poppy tea may be applied. Plantain and burdock leaves are extremely serviceable, if bound upon the skin and changed before they become dry.

VARIOCELLA—The Chicken Pox.—See *Chicken Pox*.

VARIOLA—The Small Pox.—See *Small Pox*.

VARIOLA VACCINA—The Cow Pox.—See *Cow Pox*.

VARIOLOID.—The varioloid is the having the small pox the second time, or after having had the cow pox by vaccination. Among the great multitudes who are protected from the small pox by having had that disease, or by having had the cow pox by vaccination, there are some who will take the disease a second time, or after having had the vaccine disease. But the disease is varied in its nature and symptoms, and is hence called the varioloid. There is nothing very strange in this, although, in general, the vaccine disease, as well as the small pox, is a protection to the system.

Compared with the small pox taken in the natural way, the varioloid is a mild disease. The varioloid is shorter in its course, the fever which accompanies it is much milder in its nature, the pustules are fewer in number, smaller, more pointed, and sooner come to maturity and die away. The pustules often come to maturity in five or six days, and the scabs fall off in four or five days more.

In the most severe cases, the disease does not differ materially from the true small pox of the distinct kind, though we believe that the varioloid rarely if ever assumes the character of the confluent or malignant kind. The fatal cases of varioloid are one in a hundred; those of the true small pox, one in eight.

The treatment of the varioloid consists in the use of cooling, depleting means. The diet should be light; a moderate dose of salts, or a Rochelle powder, should be taken daily; the room should be cool, the drinks cool, and, if the fever is high, blood may be drawn from the arm. The sweet spirits of nitre, in tea-spoonful doses, should be given every two hours, or the sal nitre in six grain doses. Barberry-water, lemonade, the cream of tartar water, or cold water, should compose the drinks. In case of much sickness and vomiting, a gentle emetic may be employed.

VARNISH-TREE, OR DOGWOOD—*Rhus Vernex*.—This

shrub is exceedingly poisonous. The poison is communicated merely by handling or touching it. In some instances, the smell, the smoke of it on the fire, or the steam of a decoction of it, will produce an inflammatory eruption and swelling. We have often seen the face so swelled by the effects of it as to resemble the small pox,—the eyelids incapable of opening. In the first instance, it produces a fine eruption on the skin, attended with itching, pain, swelling, and fever. The pimples gradually enlarge, discharge a watery matter, run together, and sometimes suppurate, and form a wide-spreading, suppurating blister. We have been poisoned by it many times. It is very troublesome to children and people in the country, although some people can handle it with impunity.

In common cases it can be cured by a wash of salt and water. But a more cooling and certain remedy is a wash of sugar of lead. A solution of muriate of ammonia will also cure it. In bad cases, however, where there is great swelling and a high fever, bleeding and purging must be employed. Cold water and ice must be applied, and the sal nitre given internally. A swarm of bees once lit upon a dogwood-tree, and the whole were killed; their bodies swelled to twice their original size, and turned black.

VEINS.—The veins are the vessels which circulate the purple blood. They are more numerous than the arteries, and run more upon the surface of the body. The veins return the blood from every part of the body, except the lungs. The blood is sent out from the heart by the arteries, and brought back by the veins. The two great veins which enter the right auricle of the heart, and return the blood from the upper and lower part of the body, are called the *venæ cavæ*. Those which return the red blood from the lungs are called the pulmonary veins. The pulmonary veins are the only veins in the system which circulate red or vital blood. In the veins, the blood runs much slower than in the arteries. The arteries have no valves; the veins are full of valves, which assist in the upward course of the blood. The veins, when empty, collapse; the arteries remain open. The coats of the arteries are hard, stiff, and cartilaginous; the coats of the veins are limber, soft, and membranous. The arteries pulsate or beat; the veins are passive.

The veins secrete the purple blood from the arteries with a force sufficient to propel it to the heart. As the vessels of the breasts secrete the milk and propel it from the nipples, so the veins secrete the venous blood and urge it along to the heart. The veins stand in the same relation to the arteries that the ureters do to the kidneys. After death the veins are found full of blood; the arteries are found empty. The bleeding from veins is much more easily stopped than from the arteries.

VENA PORTÆ.—This is a large vein, composed of three smaller ones, proceeding from the mesentery, spleen, and other abdominal viscera, and entering the liver. From the blood conveyed by this vein, the bile is formed. Here a curious phenomenon is presented, of a secretion taking place from the venous blood.

In all other instances, the secretions proceed from arterial or vital blood. The trunk of the vena portæ is about four inches in length.

VENEREAL DISEASE—Syphilis.—This disease is produced by an animal poison. It is the general or secondary disease which we mean to treat of in this place. Chancre, bubo, and clap have been described, and the treatment suitable to each advised under their several names. The venereal disease, lues, or pox, as it is variously called, commonly originates from one or the other of those local diseases. The venereal matter, after the lapse of six or eight weeks, if the local disease be allowed to go on without cure, is taken into the system, and produces a general disease.

When the venereal matter has impregnated the whole constitution, the throat, mouth, and skin are the first parts to show the signs of the affection. The throat becomes red and inflamed, but not much swelled; and deep, round ulcers are immediately formed. The voice becomes hoarse, and the speech somewhat difficult. The ulceration gradually spreads to the soft palate, tonsils, roof of the mouth, tongue, and the inside of the cheeks. There is an offensive fetid smell to the breath, and a great flow of the saliva. The swallowing is difficult and painful. In the progress of the ulceration, the fleshy palate is often eat off, the bones and cartilages of the nose consumed, and the bridge of the nose falls in, and is on a level with the face. The inflammation and ulceration extend to the eyes, destroy the eyelashes and eyebrows, and cause a painful and disgusting running of corrosive matter. The person talks through the nose, and from the destruction of the soft palate and the mischief done the throat, articulation is very indistinct.

The skin is covered with copper-colored spots of the size of a ten-cent piece and larger. These blotches or spots become covered with a scurf, which is continually peeling off and a new scurf forming, until, finally, a thick scab appears. When the scab is thrown off, there is left a fetid running sore. The ulcers or sores break out over the whole surface of the body; as fast as one heals, another makes its appearance. From the surface, the disease sinks deeper, and affects the bones, cartilages, cords, and the periosteum or membranous covering of the bones. Deep-seated pains arise, especially in the night-time. Hard swellings spring up upon the bones; the bones soften, ulcerate, and waste away. The skull bones, in particular, are apt to ulcerate and exfoliate in large pieces. The shin bones and the bones of the arms are covered with nodes, or hard, painful swellings. The flesh wastes away; the hair falls off; the strength and appetite fail; the sleep is disturbed and unrefreshing; and, in the end, all the symptoms of hectic fever appear. In the worst cases of the disease, a universal rottenness pervades the flesh, skin, and bones. Next to the confluent small pox, it is the most filthy, loathsome disease in the whole catalogue of human maladies. One might think this disease alone were enough to make the human family virtuous.

The venereal is a disease incident to civilization; it is not known to heathen nations. When or where it originated, is not known. It was first noticed about the time of the discovery of America, or the year 1498. It may have always existed, or it may have been produced by accidental circumstances. The human body, in different states of civilization, evidently appears to produce different kinds of contagion.

Remedies.—Cleanliness, or frequent and thorough washings with rain or spring water and soap, are indispensable conditions of a cure. If the skin is first affected, a general washing or bath should be resorted to every day. After bathing, about one third of the body should be rubbed over with the citrine ointment, or a solution of the corrosive sublimate. The day following another third should be served in the same way, and the rest of the surface on the third day. The solution of corrosive sublimate should contain one grain to an ounce of brandy or hot water. The blue ointment is sometimes used for this purpose; but it is stronger, and but little of it can be used at a time. The diet should consist entirely of vegetables and milk, and the drink should consist of nothing but cold water. Spirituous liquors are a violent poison in the disease. All venereal pleasures must be entirely foregone, and the purest air should be sought.

If the throat is ulcerated, a solution of borax must be used as a gargle, and a portion of the solution swallowed every time the mouth and throat are rinsed. A scruple, or about a tea-spoon even full, of the powdered borax, should be dissolved in half a pint of water, and a table-spoonful of the solution swallowed four times a day. We have seen this medicine cure the worst case of venereal sore throat. The strength of the solution should be gradually increased. At the same time that the borax is used to rinse the throat, fifteen drops of the diluted aqua fortis should be mixed with half a tumbler of water, and drank morning and evening. The aqua fortis should be first made of the same strength with the elixir vitriol or sour drop. One ounce of the aqua fortis should be mixed with eight ounces of water, and of this fifteen drops may be used.

In addition to this, one grain of calomel should be taken every day, until a coppery taste is perceived in the mouth, and then it should be omitted four or five days, when it should be taken again, and continued in this way four or five weeks. Two grains of the blue pill may be taken instead of the calomel where it is preferred. An eighth of a grain of the corrosive sublimate, dissolved in hot water or brandy, may be used where the others fail. A grain of the corrosive sublimate should be dissolved in four ounces of hot water, and half an ounce of the solution taken once a day.

In some cases, it agrees much better with the constitution to rub the mercury into the surface of the body. For this purpose, a mass of the blue ointment, of the size of a nutmeg, is rubbed into one or both of the groins every night, until the same coppery taste is perceived in the mouth. After this peculiar taste is ob-

served, the ointment must be omitted for four or five days, and then resumed again, and so continued for the space of four or five weeks.

There are some cases of the disease which will not bear mercury at all. It only aggravates the affection and weakens the constitution. In such cases, sarsaparilla or yellow dock tea, the antimonial powder, and cooling medicines, must be used. The sarsaparilla tea may be used for a drink. The antimonial powder may be taken in four-grain doses, three times a day. The acetate of ammonia, in a state of effervescence, is of much service in such cases. Lemonade, oranges, pine apples, and all ripe fruit, are beneficial. All salt provisions are pernicious.

There is no disease which requires the early and careful attention of the physician more than this. In addition to mercurials, the nitric acid, sarsaparilla, and antimonials, it will be found necessary often to employ the iodine or iodide of potash, and the iodide of mercury; the nitro-muriatic acid bath; to apply lunar caustic and other escharotics to the ulcers of the throat and other parts; fumigations of mercury; cooling, astringent washes of the sugar of lead and of the white vitriol; and soft bread and water poultices to the surface.

VERATRINE—Veratria.—This substance is an alkali, obtained by a chemical process from the *colchicum autumnale*,—meadow saffron. It has the same properties with the meadow saffron, in a concentrated and more active form. It is a grayish-white substance, without smell, but bitter and acrid, leaving a stinging and finally numb sensation in the tongue. It is not very soluble in water, but in ether and alcohol it dissolves readily. It combines with several of the acids and forms salts, which still retain the properties of the alcohol.

It is a powerful poison.

In small doses, it is used in medicine. The proper dose is from a sixteenth to a twelfth of a grain, several times a day. It may be given either in pills or tincture.

The veratrine is a diuretic, highly extolled in the cure of dropsy. In this country, however, it has been mostly used in the cure of rheumatism, acute and chronic. In cases where the meadow saffron would be useful, the veratrine may be used, perhaps, with equal or greater advantage. Its use requires much caution.

VERDIGRIS—Sub-acetate of Copper.—Verdigris is produced by the action of vinegar upon copper. It is a greenish rust, corrosive, and poisonous. It is seldom employed internally, but often as an escharotic upon the surface. Reduced to a fine powder and mixed into a paste with the spirits of turpentine, it will destroy scirrhus tumors and cancers. Applied to indolent ulcers, it has a more stimulating effect than most other plasters.

VERTEBRÆ.—The bones which compose the spine or backbone. They are twenty-four in number. Seven of the uppermost are called *cervical* or neck-bones; the twelve which follow are

called *dorsal*; and the lowest, five in number, are called *lumbar vertebrae*. There is another set, which, in the adult subject, compose one bone, called *false vertebrae*. This set, combined, forms the os sacrum and coccyx, and makes a part of the pelvis. Through each of the vertebrae, there is a round hole, of the size of the forefinger, designed to receive the spinal marrow or great nerve which comes from the brain. The hole in each corresponds to the others, so that they all together make a strong tube, through which the great nerve passes from the brain to the termination of the spinal column. Each bone of the true vertebrae is separated from the other by a layer of cartilaginous substance, which forms a soft bed, on which the bone turns or plays, and through which proceed a pair of nerves, one on either side, to the abdominal viscera and the muscles. Each pair is double, consisting of a nerve of sensation and a nerve of motion, in separate sheaths.

VERTIGO.—Swimming of the head, giddiness. It is commonly a symptom of fever, fainting, epilepsy, hysterics, sickness at the stomach, and other affections. In some instances, however, it is owing to a fulness of blood, or a rush of the blood to the head. In such cases bleeding is proper. If it is owing to bile in the stomach, an emetic of ipecac. or antimony will remove it. Vertigo will often follow an overloaded stomach; in this case vomiting must be excited as soon as possible. Abstinence from animal food, and a gentle dose of physic, will assist in effecting a cure. Some people are troubled with it very often, in which case it appears to result from a nervous disease. Sour drinks, such as lemonade and elixir vitriol, together with rest, will relieve it. Hard study will produce it.

VESICLE.—A little bladder or blister, filled with a watery fluid.

VIGOR OR STRENGTH.—As often as these terms are repeated, and as much as there is said about strength, it has never, to our knowledge, been made a subject of particular inquiry. The meaning of muscular strength is well enough understood; but this only constitutes a part of what we mean by the term strength. Strength, in general, implies durability, but is not exactly synonymous with it. We apply the term to express a property or condition of the whole system, and of each part in particular. That property of matter in general which constitutes strength is called attraction of cohesion, a wonderful species of affinity which the constituent particles of the same body have for each other. This property, we apprehend, constitutes the basis of strength in the human body. To this property the strength of an iron wire over the strength of a cotton thread of the same weight is owing. In the human body different parts are observed to manifest different degrees of strength. Tendons have more strength than muscles. Membranes have more strength than the substance of the liver or the brain. The flesh, vessels, and organs of young animals manifest less of this property than those which are older. For

this reason, the flesh of one is called tender, and of the other, tough.

The precise degree in which the nerves, the muscles, the vessels, and the organs, possess the property of cohesive attraction or cohesiveness, is the same in which we conceive them to possess strength; and the whole taken together we conceive to constitute strength of body, or strength of constitution.

It is quite obvious that the strength of the muscles is owing to this property of matter. Is there any less reason for supposing that the energy and strength of the nerves are dependent upon the same property? Or that the strength of the heart, arteries, veins, lungs, stomach, liver, and bowels, are each stronger or weaker, according to the degree in which they possess this property?

The strength of the muscular fibres, united with nervous and vascular strength, constitutes physical strength.

The cohesive attraction of all the parts originates constitutional strength. The strength of the brain, or the nervous energy, is by inference dependent upon the same property.

Strength of the muscles is manifested by a certain degree of hardness; and weakness of the muscles, by softness. The condition of the flesh, with respect to hardness or softness, may be taken as an index of the hardness or softness of the internal parts, and consequently of their strength or weakness. The man who can carry a barrel of water or cider upon his shoulder, possesses a strength of nerve, and a strength of stomach and lungs, in proportion to the strength of his muscles. This does not imply that his mental faculties are in proportion to his muscular strength, because they result principally from exercise and tuition. A man may possess great strength, but not the faculty of dancing, or moving his muscles in accordance with music, or set forms.

Constitutional strength is the basis of personal beauty and comeliness. Quite an opposite notion prevailed in feudal times, and still maintains its hold on many minds. Delicacy of body was deemed a badge of a greater or less degree of nobility. It was cultivated as a physical distinction between the high and low. Even now, among European and Asiatic nations where the relics of feudal customs, usages, and laws exist, the same notions of personal beauty and comeliness prevail. A delicate condition of the body, a soft, incohesive state of the flesh or muscles, a white, blanched skin, small, frail hands and feet, and tiny fingers, are among the principal constituents of beauty. Among the Chinese, a diminutive, stunted foot, produced by wearing from childhood a small wooden shoe, while it forms a physical distinction between the high and low bred people, is accounted a peculiar beauty. However chimerical and absurd the Chinese usage may appear to us, it is of the same nature with, and no less a departure from reason and common sense than the other physical peculiarities which we have just noticed. The training which produces it proceeds from the same motives; and instead of improving the

symmetry of form, it, in all cases, has an effect to injure and destroy it.

If high and low bred people are to be distinguished by corporeal, physical marks, the distinction will most certainly be dearly bought. The foot of the Chinese lady is stunted and crippled, and so are the bodies and bodily organs of those who, in their physical education, follow the example set in feudal, chivalric, barbaric times, when a lady or a gentleman was known only by the delicacy and smallness of the hand or the size of the foot. The beauty and comeliness of such things are extrinsic, derived from their association with wealth, power, and splendor, and cease to charm when the association is broken up, or when reason governs.

This subject is the most important and practical of any which relates to health and disease. The strength of the body is in a great measure dependent upon our physical education and training. It is influenced by exercise, air, food, heat, cold, and light. It is in the power of parents and guardians to raise a strong, vigorous, healthy race of people, or a stunted, crippled, feeble set.

It should become a popular axiom that every condition of the body which is inconsistent with health and strength is wanting in beauty and comeliness. Is it desirable to be feeble, sickly, and dependent; to be carried about in a carriage, because we have not the strength to walk; to prevent our limbs, our hands, and our feet, from growing to their full size, and our body from attaining its full dimensions; to deprive our skin of its coloring matter in order to please our fancy, or to gratify the absurd taste transmitted down from barbaric ages; to live in dread of the common changes of the weather; and to regard the very air which vivifies our blood and animates our minds as an enemy to be shunned?

It is within the observation of every one that exercise or labor in the open air, united with a supply of wholesome food, produces a degree of closeness of the fibres of the flesh not attainable by indolence and confinement. This closeness of the animal fibres is the effect produced by the attraction of cohesion, and as far as we can perceive is the basis of strength. This effect, extended to all the organs, vessels, and tissues of the body, is the object to be attained by our physical education. A want of cohesiveness in the blood-vessels, membranes, and substance of the organs, is attended with danger and disease. Hemorrhages or bleedings; effusions of blood in the brain and nerves, attended with apoplexies, palsies, and dropsies; obstructions in the menses and other secretions; indigestion, nervous complaints, and a thousand other disorders, arise from a want of tone or cohesion in the blood-vessels, stomach, uterus, and in the system at large.

Exercise or labor may be carried to an extreme, and produce a misshapen form of the limbs and an overgrowth of the hands, feet, and other parts. Necessity, avarice, or a state of servitude, will often produce this extreme. It also may produce a degree of dryness and hardness of the solid parts incompatible with durability and easiness of motion. Instances of this kind are often seen in

people who labor to excess. The palms of the hands become thickened and horny, the knuckles and joints enlarged, and the skin almost tanned like leather. This is the effect of excess, and to be avoided.

It is truly wonderful how soon an effeminate, tender, delicate constitution may be changed and strengthened by exercise or labor in the open air, and a diet of plain, wholesome food. In the course of a few months, we have seen both sexes transformed into new creatures. The flesh has become cohesive and hard, the hands, arms, and muscles enlarged, the fibres closely knit, the skin restored to a healthy color, and a consciousness of strength in the whole system created. In a few years, every fibre in the body becomes coherent, solidified, enlarged, and strengthened, excess of nervous sensibility remedied, sound sleep restored, and all the functions of the body healthy and vigorous. The step becomes elastic and the gait lively and animated. When the system possesses strength, diseases are light and infrequent. There can be no real independence without constitutional strength. Virtue itself is closely allied to strength. The mind, scarcely less than the body, is benefited by a closeness and cohesiveness of the animal fibres.

The constitutional strength is capable of increase by medication. Certain substances are endowed with the property of constringing the flesh, or of rendering its fibres more close and coherent. This is called an increase of tone. Such substances are numerous, and known by the name of astringents and tonics. They are thought to operate upon the living fibre in a way similar to the action of tanning upon dead animal skins. Taken into the stomach, they first increase the cohesive power of that organ, and ultimately the tone of the whole system. Upon the skin, mouth, and tongue, they produce more or less of the same effect. But the most effectual method of producing, increasing, and perpetuating constitutional and organic strength, consists in habits of exercise or labor, in breathing the pure open air, in cleansing and bathing the skin, in accustoming the system to the influences of the sun, and in a temperate manner of living.

If, however, the influence of fashion and the weight of old usages and customs are more than people are able to withstand; if they must be overborne by the chimerical notions of barbaric times, and ruled supremely by the standards of beauty and comeliness which prevailed in the infancy of knowledge, letters, and civil institutions, their object might be obtained in a way much more consistent with a general firmness of the constitution and security of health. It is a well known physiological fact, that, by taking up and tying the main artery which supplies any particular organ or part with blood, that organ or part will become diminished in size and strength, as the nutriment of the organ or part is in a great measure cut off. Those, therefore, who admire diminutive hands and feet, tiny fingers, and slender wrists and ankles, might produce them by having the main arteries of their arms

and legs taken up and tied, so that the parts beyond should be fed only by minute vessels, and their size and strength brought to a *perfect* standard of beauty and symmetry! This operation would probably be less injurious to the system at large than the method at present in vogue to accomplish the same end!

VINEGAR—Acetous Acid.—This acid is obtained from cider, beer, wine, and other fermented liquors. The acid or sourness is generated in these liquors by the absorption of oxygen from the air. Left exposed to the air in uncorked vessels, in a moderate temperature, they soon become oxygenized or converted into an acid. Vinegar is composed of hydrogen, carbon, and oxygen. Small portions of tartarous acid, tartrate of potash, mucilaginous matter, and phosphoric acid, are commonly found in vinegar, besides a large quantity of water.

To be pure and good, vinegar should be distilled. The distilled vinegar is transparent and colorless.

With water, sweetened with sugar or molasses, vinegar makes a cooling, tonic, agreeable drink. It is slightly stimulating and astringent. In hemorrhages from the nose, stomach, and bowels, vinegar is a safe and effective styptic. In fevers, taken with water, it will supply the place of lemon-juice and more expensive acids. The smell of vinegar is peculiarly vivifying. It relieves fainting, hysterics, and headache. Vinegar and water, applied to the head for half an hour, so as to wet it all over, will relieve the most violent headache. With salt, it makes a good gargle in putrid sore throat. Mixed with rum or alcohol, and applied hot, it will resolve the most obstinate swellings from sprains and rheumatic affections. The fumes of vinegar neutralize the smell and bad air of sick rooms. Applied to inflammations and eruptions upon the surface, it often disperses them.

Vinegar uniformly increases the appetite of healthy people, and appears to give tone to the stomach in cases of debility. Fevers are very much relieved by frequently washing the skin with vinegar and water.

To prevent vinegar from becoming turbid and ropy, it should be boiled in a tin vessel, and put up in well-corked bottles; or it may be frozen, and the pure vinegar poured off from the ice.

VIOLINE.—An alkaline and bitter principle obtained from the violet, supposed to be the same with *emetine*, which is obtained from ipecac. Emetine is the active principle of ipecac., without its disagreeable smell and nauseous taste. It is an alkaline substance, consisting of reddish-brown or white scales, and, uniting with the acids, forms neutral salts. It is used instead of ipecac.

VISCERA.—Those organs and parts of the body which discharge an appropriate office, like the kidneys, bladder, bowels, liver, and uterus.

VITRIOLATED TARTAR—Sulphate of Potash.—This is a salt which results from the combination of oil of vitriol and potash. It consists of hard, ragged transparent crystals. It has a bitter taste, and dissolves slowly in water. In the dose of a scruple or

half a drachm, it operates as a laxative; in the dose of half an ounce, as a mild purgative. It forms one of the constituents of Dover's powder. It is no doubt an active diuretic.

VOMITING.—The act of vomiting is merely a symptom of some affection of the stomach. It shows that either the nerves or coats of the stomach are diseased, or that there is some irritating substance within the cavity of that organ. It is not improbable that the gastric juice or some acid or other secretion may irritate the organ and excite vomiting. The most ordinary cause of vomiting is bile, which has forced its way into the stomach from some stoppage below, or from an excess of bile in the intestines. There are many kinds of food taken into the stomach which excite vomiting, even where no excessive quantity has been taken. Almost any article which is entirely new, or to which we are not accustomed, will produce more or less uneasiness. Headache and many other affections of the body, even where there is no fever, will excite vomiting. Sailing in a boat and riding in a carriage will produce sickness and vomiting. The affections of the mind, or of the brain and nerves, will occasion vomiting. Anything which produces faintness will cause the stomach to throw.

The stomach itself is often the seat of irritation and inflammation, which is manifested by vomiting and retching.

If bile or the headache is the cause of vomiting, the proper remedy is an emetic. A tea-spoon even full of ipecac., or of the powdered leaves of lobelia, is always a suitable dose for a grown person. If the stomach has been overloaded with food, or oppressed with any article which does not agree with it, no time should be lost in giving an emetic. In some cases the stomach will be sufficiently evacuated by drinking large draughts of warm water, or camomile tea. If the stomach is neither oppressed nor overloaded, the vomiting may be allayed by a little calcined magnesia, super-carbonate of soda, or a wine-glassful of spearmint, peppermint, ginger, or spice tea. Wormwood tea will, in some cases, succeed. If the vomiting is very obstinate, thirty drops of morphine or of laudanum, with a dose of castor-oil, may be given. If the vomiting is owing to sourness of the stomach, a piece of crude soda, of the size of a kidney bean, dissolved in water and swallowed, will stop it.

A tea-spoonful or two of paregoric is almost sure to stop an ordinary case of vomiting. The same effect will follow a draught or two of poppy tea.

If, after the stomach has been thoroughly emptied, and soothing things taken, the vomiting still continues, we may suspect some disease of the stomach itself, which will require the use of leeches, and a depleting treatment. Such a treatment may be found described in the articles on Cholera Morbus and Inflammation of the Stomach.

In almost all cases where the stomach is not overloaded with food or distressed with some poisonous article, the poppy tea will be found a sufficient remedy.

In sea-sickness, the vomiting can be allayed by pretty full doses of morphine and laudanum. Forty drops may be given at a time, in a little water, and repeated in half an hour if the first dose does not succeed. Vomiting, in children, may often be allayed by wetting a piece of cloth with laudanum, and laying it upon the pit of the stomach. Lemonade, a soda powder, or a little hartshorn in water, will often allay sickness at the stomach. The creosote has of late been used with success in sea-sickness.

VOLATILE LINIMENT.—Take of sweet oil, two ounces; water of ammonia, —smelling drops, —two drachms; or, in other words, a wine-glassful of sweet oil, and two tea-spoonfuls of water of ammonia, and mix them together in a phial. Shake the phial, and the contents will combine and form the liniment. This is an excellent application to the skin in cases of rheumatism, sore throat, and other inflammatory complaints. If thoroughly applied, it will cause a sweat; and perhaps in this its efficacy may consist; at least, it should be regarded as an evidence that the application is properly made. The liniment may be made stronger or weaker, as the case may require. Mixed with laudanum, in the proportion of a tea-spoonful to two ounces of the liniment, it seldom fails to relieve chronic pains in the joints and muscles.

VORACIOUS APPETITE.—See *Inordinate Appetite*.

W.

WARTS AND CORNS.—Warts are small, unsightly excrescences of the scarf-skin, most frequently met with upon the hands. Children, young persons, and laboring men, are more subject to warts than old and infirm people, and those who do not labor. They are strictly local, and indicate an active circulation in the skin. They have a regular growth, and then die away of themselves. Sometimes they are difficult to remove, though they often disappear without any sufficient known cause. Perfect cleanliness, and rubbing them every night with common hard soap, and washing it off in the morning with warm water, will sometimes remove them. Touching them with blue vitriol, or lunar caustic, every day or two, and burning them by passing a heated needle through them, are often practised with success; but perhaps the best remedy is aqua fortis, —nitric acid. This requires to be applied with caution, as, by using it too freely, or carelessly, unnecessary sloughing and inflammation may be the consequence. As they do not penetrate the true skin, no scar is left, except it be from the too powerful action of the caustic.

Corns partake somewhat of the nature of warts, and it is the common practice to treat them by the means which have been recommended above. But the best and safest way of curing them is to make a hole of the size of the corn in one or more pieces of

wash-leather, spread with diachylon plaster, which shall admit the corn, and to cover the top with another piece of a larger size. This keeps the corn free from all friction or rubbing, and allows it to heal. Corns are cured by frequently bathing and soaking them in warm water. It is, however, very difficult to cure them without wearing a loose cloth or India rubber shoe, or going barefooted. The moisture which collects in an India rubber shoe softens them, while the shoe itself allows them a free play. Those who go barefooted never or seldom have corns, which shows that they are produced by tight shoes and boots. If they become sore and inflamed, a dossil of lint, wet with laudanum, should be used. This eases the pain and relieves the soreness. Merely covering them with a lead or diachylon plaster affords relief, and sometimes effects a cure.

WATER.—Water is composed of two distinct elementary airs or gases:—hydrogen, which is extremely light and inflammable; and oxygen, which is the supporter of life and combustion. Eighty-five parts in a hundred are oxygen, and fifteen hydrogen. Water dashed upon a hard-coal fire, or a red-hot iron, will separate into these two elements. The hydrogen gives an offensive smell. When the hydrogen is burned in the air, water is reproduced.

The principal kinds of fresh water are *well water*, *spring water*, *ice*, *snow*, and *rain water*, *river water*, and *stagnant water*.

Well water is commonly impregnated with earthy and saline substances. The cause of hard water is owing to the chalk, clay, or mineral with which it is saturated. It is supposed that well water, in general, contains five grains of earthy salts to a pint. This renders well water less friendly to the system than rain water.

Spring water is rather more pure, in general, than well water, but it always contains more or less of the same substances in solution as well water.

Ice, snow, and rain water are almost entirely free from any kind of gas or earthy substance. It is soft, light, and readily passes through the body. If it were possible, it would be exceedingly desirable to drink nothing but rain water. Indeed, in all acrid humors, cancerous affections, and malignant ulcers, the patient should drink only rain or distilled water.

River water, as it runs near the surface, contains much less earthy matter than well or spring water, and is much better, when pure, for drink.

Stagnant water is always unhealthy; besides earthy matter, it holds in solution noxious gases and decomposed vegetable matter. Even the vapor of a lake or a marsh is supposed to generate the bilious and intermittent fevers. Its use, if possible, should always be avoided.

The purest of all water is distilled rain water. In this there is neither gas nor earthy matter. It is, however, seldom used except for medical purposes.

WATER-BRASH—*Pyrosis*.—This disease is synonymous with heart-burn. The water-brash consists of a ropy, transparent, watery matter discharged from the stomach. Usually there is a burning sensation in the stomach, which precedes and attends the discharge, and appears to give rise to it. There is not always a sourness in the stomach, although it is a frequent attendant. The glairy discharge, which will sometimes pour from the mouth in a stream, has often a sweetish taste. A fit of the heart-burn or cardialgia in many people will always end in the eructation of this ropy fluid. The discharge appears to be the natural mucus of the stomach increased by a specific irritation, or sub-acute inflammation of the secreting membrane.

The water-brash is attended with cold hands and feet, and is supposed to be produced by exposing the feet to cold, and by violent emotions of the mind. The disease affects young persons, and is the source of much distress, although not dangerous. People affected with this disease can seldom eat rye and Indian meal bread, Indian puddings, baked beans, dried herrings, chipped beef, or sausages, without causing a fit of the water-brash. The disease may be owing simply to a weakness of the stomach. If the watery discharge from the stomach consists of the gastric juice, we might suppose, from the quantity of it, that the digestive power and the appetite would be very great, which, in general, is not the case.

Domestic Remedies.—As bread is with most people a principal article of food, it will be necessary to live upon such a kind as will not ferment or turn sour upon the stomach. In general, the unbolted wheat meal bread is the least liable to ferment, and the most friendly to the action of the bowels. Flour bread eaten cold is much less liable to ferment or to turn sour than Indian meal bread. Hard bread, soda-crackers, and sea-biscuit are found to sit easy upon the stomach in this complaint. The drink should be confined to cold water or milk and water. Fresh meats are preferable to salted food.

To relieve a fit of the water-brash, a tea-spoonful of the calcined magnesia should be taken in a little water. More effectual relief is always obtained by taking enough to move the bowels. Ten or fifteen drops of the water of ammonia, in half a tumbler of water, will quiet the distress and check the discharge. A lye made from clean wood ashes, or a little pearlash or saleratus water, will have the same effect. If the heartburn and distress are severe, thirty drops of laudanum, or of morphine, should be taken. A draught of strong poppy tea will answer the same purpose.

Five grains of the oxide of bismuth, taken in powder every morning, for several weeks in succession, will often cure the disorder effectually. If costiveness attends the disorder, a couple of aloetic pills should be taken with the oxide of bismuth. Chalybeate spring water is often found extremely serviceable.

Large blisters drawn upon the chest will sometimes afford essential relief.

WAX.—This substance is made by melting the honeycomb of bees in hot water. It is of a yellow color, hard, and tough. It may be whitened by melting it, running it into thin plates, and exposing it to the sun, frequently wetting it with water; in a word, it is bleached precisely as farmers used to bleach cloth. The white looks the most delicate, but, for medical purposes, it is no better than the yellow. Wax is chiefly used for salves, plasters, and ointments.

WEN—Tumor.—A wen is a swelling formed upon the surface of the body. It is neither sore nor painful, and is of a very slow growth. Wens are contained in a bag or sac, and mostly consist of a fatty or a fluid substance like honey. Some consist of a substance which resembles the curd of cheese. Wens most commonly appear upon the head, neck, shoulders, and back, but are sometimes seen upon the fleshy part of the legs, and other parts of the body. They are usually of a round, oval shape, but sometimes have a neck and are shaped like a pear. When they grow upon the head, they are not covered with hair, but present a white, shining appearance.

Wens sometimes grow to an enormous size. Sir Astley Cooper says, he once saw a wen upon a man's thigh which weighed, after it was removed, between fourteen and fifteen pounds. Mr. Copeland removed a wen which weighed twenty pounds. The usual size of a wen is about that of a hen's egg. The substance of which wens are composed is various. Some are full of blood-vessels, and others appear to contain none. The matter of some resembles the substance of the brain; of others the substance of a cow's udder; the matter of some, again, will resemble the pancreas, and of others the fatty substance of pork.

The applications which have gained most repute for discussing encysted tumors are such as contain sea-salt, muriate of ammonia, &c. The only certain remedy, however, for these tumors is to have them extirpated by the knife. In cutting them out it is of the utmost importance to dissect out all the sac in which they are contained, otherwise, the wen will be apt to grow again. They are caused by some disease of the blood-vessels of the part where they are situated. We only know it to be some wrong action of the vessels of the part, but what the particular nature of the action is we are unable to discern.

WEeping SINEW.—This is a tumor filled with a watery matter, and situated in the white or tendinous part of the muscles. They may be cured by pressure, washes of lead and white vitriol, lunar caustic, and frictions with alcohol and opodeldoc. They are seldom sore or painful. They first appear in hard knots or bunches, and sometimes will appear in great numbers upon the inside of the arm.

WEIGHTS AND MEASURES FOR POPULAR USE.—

Physicians make use of what is called apothecaries' weight, and the characters used for pounds, ounces, drachms, scruples, and grains, are the same as are found in every common arithmetic.

Thus, the character ℔ . stands for a pound; the character ℥ stands for an ounce; ℥ , for a drachm; ℥ , for a scruple; gr., for a grain.

A pound is 12 ounces; an ounce is 8 drachms; a drachm is 3 scruples; a scruple is 20 grains.

Measures.—Cong. stands for a gallon; O stands for a pint; f℥ stands for a fluid ounce; f℥ stands for a fluid drachm. A gallon contains 8 pints; a pint contains 16 fluid ounces; a fluid ounce contains 8 fluid drachms; a fluid drachm contains 60 drops, or minims.

In the absence of proper weights and measures, a tea-cup, a wine-glass, a table-spoon, and a tea-spoon may be substituted for popular use. A common-sized tea-cup is estimated to hold a gill, or four fluid ounces; a wine-glass, to hold two fluid ounces; a table-spoon, to hold half a fluid ounce; a tea-spoon, to hold a fluid drachm.

Small quantities of liquid medicines are given in drops. Sixty drops are equal to sixty grains; that is, a drop may be considered a grain of liquid. For children, liquid medicines should be dropped from a small-nosed phial, as a phial of a large nose yields a larger drop. For infants, medicine should be dropped from half-ounce and ounce phials.

As the size of tea-spoons and great-spoons vary according to fashion, the tea-spoon may be measured by dropping sixty drops of water into it from a two-ounce phial; if it holds more, it holds so many more drops than a drachm; if it holds less than sixty drops, it holds so many drops less than a drachm. A great spoon may be measured by the tea-spoon. A great spoon commonly contains four tea-spoonfuls of water or other fluid. It would be well for people to have one of each kind of spoon made according to measure.

For powders and solid substances, no accurate standard can be given. The specific gravity of solid bodies varies so much that nothing but weights and scales can be relied upon. Many common, mild medicines, such as salts, herbs, ipecac., rhubarb, and some bitter substances, are given by the tea-spoon, or great spoonful, or by the handful; but the active, strong medicines must be weighed in scales, or by the eye of an experienced physician.

WHITES—*Fluor Albus*—*Leucorrhœa*.—This disease consists in the discharge from the womb, or vagina, of a whitish fluid, which is sometimes thin, and at others thick. It varies between the consistency of cream and milk. The precise condition of the internal surface of the womb, which produces this unnatural discharge, is not well known; but there can scarcely be a doubt of its being the result of a chronic, sub-acute inflammation; the internal surface of the organ is in a sore, red state. We know very well what the situation of the mucous membrane of the

throat is in chronic catarrh, and of the eyelids, in chronic ophthalmia, and have every reason to suppose that the mucous membrane which lines the womb is in the same state in the disease before us. The alteration in the natural secretion is nearly the same in each case. There is an increase in quantity and a change in quality.

The older writers attribute the disease to a laxity of the secretory vessels of the organ. But the term laxity has no intelligible meaning. There is no such alteration of any of the functions of the body from mere laxity that we know of. A mere laxity implies a want instead of an increase of action.

The whites is evidently a local disease, although, when long continued, it deranges the tone of the whole system, like other local chronic disorders.

It commonly makes its appearance just before, or soon after, the monthly sickness, and is chiefly incident to those who are subject to an immoderate flow of the menses. It varies both in quantity and quality; and the disease is subject to every degree of severity. In many females, the discharge is constant, and in others periodical. It never lasts long without producing a weakness of the whole system, and a disorder of the nervous and digestive systems. Dyspeptic symptoms are almost sure to follow, to a greater or less extent, when the disease is severe. A paleness of the skin, a want of muscular energy, and a general delicacy of health, are the sure concomitants. Like all great drains upon the body and blood, this unnatural flow of vitiated mucus is sure to undermine the general health. The precise nature of the fluid has never been analyzed, but is evidently, in some instances, very acrid, and may be mistaken for the gonorrhœa. The latter, however, is a more inflammatory disease, attended with more heat, scalding, and soreness.

In the commencement, the discharge in the whites is mild, but becomes more acrid as the disease continues. Dr. Cullen supposes the discharge to proceed from the same vessels which secrete the menses; this may or may not be true, but from whichever set of vessels the issue takes place, we think the condition of these vessels must show a slight degree of inflammation.

Remedies.—In this disease, as in the chronic catarrh, emetics have been found to be of as much service as any medicines which have been tried. They are peculiarly friendly to the diseased mucous membranes. A gentle emetic of ipecac. may be employed every three days, until three or four have been taken. After this treatment has had its full effect, one grain of opium, and one of ipecac., in pill, may be taken twice a day for three or four weeks in succession. The diet should consist of vegetables, but should be plentiful and nutritious. Regular hours of sleep should be observed, and as much exercise taken about the house and in the open air as will refresh the system without exhausting the strength. Warm bathing may be resorted to, but cold bathing is, we think, a doubtful remedy. The feet should

always be kept dry and warm, and the dress sufficient to prevent chills and colds. Some constant but gentle employment of the mental and muscular powers will contribute to the cure. Women in the country towns, who lead a more active life, are less liable to the complaint than those in cities. In women of a delicate make and inactive life, the disease is more easily induced than in those of a firmer texture.

The precipitated carbonate of iron and extract of cicuta, in the proportion of twenty grains of the iron to one of the cicuta, taken twice a day for a length of time, will both strengthen the tone of the system and allay the irritability of the uterus. The poppy tea, drank two or three times a day, is a good medicine. Six grains of the Dover's powders, taken twice a day, is one of the best of means to quiet and restore the proper action of the uterine vessels.

A strong tea of nut-galls or of oak bark, used as an injection to the internal surface of the organ, has often produced lasting good effects. Solutions of alum, sugar of lead, and white vitriol, are often employed with the same intention. But the use of warm spring or rain water in this way is often preferable to either of the foregoing, if employed often.

Forty drops of the balsam of copaiva, three times a day, will often be advantageous. Twenty or thirty drops of the spirits of turpentine, on sugar, will have much the same effect. The balsam of life, in tea-spoonful doses, is an excellent medicine in this complaint.

The bowels should be kept open by the use of lenitive electuary, Rochelle powders, extract of butternut, or aloes; and plasters of pitch or galbanum worn upon the small of the back. The Griffith's mixture is an old and an excellent medicine. Rhubarb is thought by many to be a useful medicine. The consolidated balsam of copaiva should be tried. The sweet spirits of nitre and Hoffman's anodyne liquor are often useful, in the dose of a tea-spoonful.

Where there is much general weakness, the strength must be restored by the use of quinine, wine, the mineral acids, and chalybeate medicines. The Congress spring water has benefited many, and should be resorted to wherever practicable.

WHITE SWELLING.—The seat of this disease is, for the most part, in the knee joint, although it sometimes affects the ankle, wrist, and elbow joints. It is a hard, shining, glossy enlargement of the joints; in most instances extremely painful, but in some there is scarcely any pain. Such is the hardness of the swelling, that no print is left when pressed by the fingers. However vehement the pain and large the swelling, the skin remains white. The joint, in time, becomes more or less stiff and inflexible. The flesh of the limb above and below the joint wastes away, and this makes the enlargement of the joint appear much greater than it otherwise would. In its progress, the disease is exceedingly slow. Suppuration at length ensues; matter

is formed in the joint, and discharged by several openings. One ulcer continues to form after another, until the strength, flesh, appetite, and sleep of the patient are exhausted.

In some cases several years will elapse before any ulceration takes place. In other cases the disease will subside in a few months, without either ulceration or stiffness of the joint. But where the disease continues for a long time, it is apt to end in a hectic fever, and carry off the sufferer.

The disease appears to be sometimes the effect of rheumatism, and other times, of sprains and bruises. It is supposed, in many instances, to be the result of a scrofulous temperament; but this is the opinion of others, not our own.

The pain in this disease can only be relieved by opium. The joint should be bathed several times a day, with warm poppy tea. If the pulse is good, leeches should be applied to the extent of four or five dozen in the course of eight or ten days. The effect of steam should be tried upon it. Soft rye meal, flax-seed, or white bread poultices, wet with laudanum, should be employed between the times of bleeding. The volatile liniment, to which laudanum has been added, in the proportion of one ounce of the laudanum to eight of the liniment, has been found a potent application. Equal parts of new rum and vinegar, used hot, is remarkably good as an external application. Blisters, applied above and below the diseased joint, have a tendency to remove the swelling and to ease the pain. Solutions of sugar of lead and of white vitriol, salt and brandy, and sal ammoniac, are among the most valuable external applications.

Where the disease does not yield to local applications, general medicines should be employed. The warm sulphur bath, steaming the whole body, and frequent bathing in warm water, will be likely to be of service. In cold, enfeebled constitutions, the hot-drops, tincture of myrrh and red pepper, may be taken internally, and rubbed upon the diseased joint. Sarsaparilla tea, in combination with an eighth of a grain of corrosive sublimate, taken daily, is said to have cured the disease. Swaim's panacea has had a high, and, apparently, well-deserved repute in the cure of the disease. We have great faith in soft, warm white bread poultices. In case these remedies fail, the antimonial powder, sal nitre, and cathartics must be employed to operate upon the system generally. A dose of salts or of aloes, taken frequently for three or four weeks in succession, may reduce the swelling better than any other remedy. The cold shower bath should be tried upon the limb. If the strength fails, quinine, Griffith's mixture, and the mineral acids must be employed.

WHITE SULPHUR SPRINGS OF VIRGINIA.—The white sulphur springs of Virginia have long been celebrated for their medicinal virtues. Says Dr. J. V. C. Smith, editor of the Boston Medical and Surgical Journal, who visited them in 1843,—"It is a free spring, bubbling up through limestone rocks, tastefully protected by a prostyle temple, sufficiently large for shield-

ing visitors from sun or rain while at the fountain. The water has a disagreeable taste and smell, hardly to be endured by a new comer." "With regard to the medicinal properties of the water, the point has been settled by competent authority; it possesses extraordinary qualities, and, hence, invalids from great distances traverse the wild, mountainous regions of Virginia, in pursuit of the last balm in Gilead,—for they seldom ascend the Alleghanies till all other supposed remedies have failed of giving relief." Dr. Moorman, who resides at these springs, and has long observed the operation of the water, says that "*Its medicinal effects are most obviously displayed in its action upon the bowels, liver, and kidneys.* The liver is, in most instances," continues Dr. M., "brought under its influence, from a few days' perseverance in the use of it, as will be abundantly manifest from the character of its secretions. Its action upon the kidneys is generally readily induced, and we not unfrequently see it exerting, at the same time, both a diuretic and a cathartic effect. Occasionally, the exhalent vessels of the skin are early stimulated to increased perspiration; but its full effects upon the surface, manifested not only by increased, but sulphureous perspiration, do not often ensue until it has been freely used for some weeks; nor until the secretory system, generally, has been brought under its influence." Dr. Smith says, that "the water is extensively transported over the country in barrels and bottles, to be retailed at an enormous profit." This water appears to us to be admirably suited to cure diseases of the skin, to remove humors, and to heal obstinate eruptions.

WHITE VITRIOL—Sulphate of Zinc.—This substance is a composition of oil of vitriol and the metal called zinc. It is a mild, but efficient, mineral astringent. It consists of small white crystals, very soluble in water. In the dose of ten or twenty grains, it is one of the speediest emetics which we possess, and in all cases of emergency it may be administered. Dissolved in water it is a good remedy in croup. In small doses it is a good tonic as well as astringent, and is given in hemorrhages from the womb and the bowels.

Its principal use is as a cooling lotion to the skin and inflamed surfaces. Two grains dissolved in an ounce of water makes a good eye-water, and a solution of the same strength may be used in the cure of gonorrhœa by way of injection. The white vitriol is one of the best articles in the materia medica. It makes a good wash for old ulcers, and a great variety of cutaneous affections.

WHITLOW.—See *Felon*.

WHOOPIING COUGH—Pertussis.—In the commencement it is very difficult to distinguish the whooping cough from an influenza or common cold. It comes on very much in the same way, and the cough is not distinguishable from a common cough for several days. Sometimes it will be a fortnight before the real whooping sound will be heard. After the whooping commences,

symptoms of strangulation attend almost every fit of coughing. The breath will often be lost for so long a time, that the face, lips, and neck will turn purple, and the eyes will be swelled almost out of the head. The child is obliged to take hold of something in order to support the convulsion of coughing. The fit of coughing is very often cut short by vomiting. The rapidity of the coughing, whooping, and the vomiting, distinguish it from other coughs. There is usually brought up, by every fit of coughing, a load of tough, glairy phlegm, which, in young children, is swallowed into the stomach, and by those who are older is expectorated. The act of vomiting not only throws off the phlegm which has been swallowed, but greatly relaxes the wind-pipe and lungs and promotes the secretion of the mucus. There is often considerable fever, especially in the night, when the disease is coming on. The child will appear heavy, the face red, and the eyes filled with tears, with sneezing and running from the nose.

In ordinary cases, the disease will run about six weeks; it will be three weeks in getting to its height, and about as long in subsiding. When the skin is moist and warm, the appetite good, and the expectoration and vomiting free, the disease will commonly end favorably. In some cases the disease will be protracted to three or four months. In infants, convulsions, suffocation, apoplexy, inflammations of the brain, and ruptures are to be feared, and in adults, consumption. The coughing will be so rapid and violent as to force blood from the nose, mouth, and ears. The looser and the greater the quantity of phlegm, the milder the disease will be.

The whooping cough is evidently an inflammation of the wind-pipe. This is proved by the quantity of phlegm which is secreted,—an effect which could not be produced by spasm. Mere spasm would not materially affect the function of the part, although it might account for the convulsive efforts of coughing. Moreover, it is not the nature of spasm to produce febrile symptoms and to remain permanent for so long a time.

The treatment of the disease consists chiefly in the use of emetics, and expectorants or medicines which loosen the phlegm. In some cases, where the pulse is full and hard, the fever considerable, and the cough violent and suffocating, leeches should be applied to the neck and chest. Blisters are often extremely useful in moderating the inflammation of the air-passages. The syrup of squills and castor-oil, in equal parts, given every day as long as the cough continues violent, is an excellent remedy. The diet should always be light, and the child be strictly guarded against the extremes of heat and cold, and all violent play or work. Indeed, the disease should be treated very much as we would treat a severe case of influenza or violent cold. It is too much the custom to let children run at large with this complaint. In some cases, to be sure, it may answer, but as a general rule, some degree of confinement and dieting are neces-

sary. The tincture of lobelia, either as an emetic or in smaller doses as an expectorant, is probably as good a medicine as there is in use in this disease. To procure sleep and respite from the violence of coughing, we must sometimes make use of the Dover's powder, paregoric, or morphine. It is always best, however, to combine them with some expectorant, as antimony, squills, or lac ammoniac. The whooping cough is contagious, and usually comes on in about two weeks after being exposed to it.

WILLOW, BROAD-LEAVED—Broad-leaved Willow—*Salix Latifolia*.—This species of willow grows in woods and hedges, on hilly places, and flourishes in a clayey, cold, moist soil. The taste of the bark is astringent and slightly bitter, but the bitter taste is lost by drying. The tea is of a reddish color. It is thought by some physicians to be equal to the Peruvian bark in the cure of fever and ague. An ounce and a half of the coarse powder of the bark may be infused in one quart of water for six hours, then boiled over a gentle fire for fifteen minutes, and strained. The common dose of this tea is two or three large spoonfuls, three or four times a day. In the fever and ague the dose may be one or two ounces every third hour, in the interval of the paroxysms.

All those substances which resemble the Peruvian bark in their action upon the system should be analyzed, to ascertain if they contain quinine. This would seem to be probable, and, perhaps, some one may be found to yield quinine in equal abundance.

WINDPIPE—The Trachea.

WINE.—Wine taken in a suitable manner is a good remedy. It is one of the best diffusible stimulants which we possess. It quickens the vital energy when sunk by disease, animates the spark of life when extinguished by faintness, produces warmth, raises the pulse, and cheers the spirits. It gives strength in less time than it can be produced by any other substance. For this reason it is often given in low fevers and diseases of debility. It quickens the appetite and improves the condition of the whole system. If it increases the fever it should be discontinued. It should be used only as a medicine.

Drank to excess, it inflames the liver, disorders the nervous system, produces dropsy, apoplexy, delirium tremens, and a host of other diseases.

The intoxicating quality of liquors depends upon the quantity of alcohol or highly rectified spirits which they contain. Brandy possesses fifty-four per cent., or a little more than one half by measure, of alcohol. Rum, gin, and whiskey, possess nearly the same proportion of the intoxicating principle. The strongest Madeira wine contains twenty-four parts in a hundred, or about one fourth part, alcohol. Port wine contains a little more than one fourth of alcohol; and sherry, nineteen parts in a hundred. Claret and champagne contain twelve parts in a hundred, or one eighth, of alcohol. The wines, on an average, contain about one fifth part alcohol, while the distilled liquors contain more than one half. In

a glass of distilled spirits there is commonly three, and often seven times the quantity of alcohol contained in a glass of wine. Ale and cider contain from five to ten parts of alcohol.

Distilled liquors were not known until about the thirteenth century; the ancients knew no stronger liquor than wine. But hear what Seneca says of wine or a wine-bibber:—"It is an ill thing," says this philosopher, "for a man not to know the measure of his stomach; nor to consider that men do many things in their drink, that they are ashamed of when sober, drunkenness being nothing else than a voluntary madness. It emboldens men to commit all sorts of mischiefs. It both irritates wickedness and discovers it. It not only makes men vicious, but shows them to be so. It makes him that is insolent, prouder; him that is cruel, fiercer; it takes away all shame. How many warlike and strong cities, that have stood invincible to attacks and sieges, has drunkenness overcome! Is it not a great honor to drink the company, dead? A magnificent virtue to swallow more wine than the rest, and yet be outdone by a hogshead? What shall we say of those men who invert the offices of day and night, as if our eyes were only given us to make use of in the dark? Is it day? It is the drunkard's time to go to bed. Is it night? It is his time to rise. Is it morning? he goes to supper; when other people lie down, he rises; and he lies until the next night to digest the debauch of the day before."

The human pulse, in all ages of the world, has been consulted as an index of health or disease. It is a kind of dial within us, which gives us both the true measure of time and of health. The pulse of a person in health beats about seventy strokes in a minute, and the ordinary term of human life is about seventy years. In this seventy years, the pulse of a temperate person beats 2,575,440,000 times. If no actual disorganization should happen, a drunken person might live until his pulse beat this number of times, but by the constant stimulus of ardent spirits, the pulse becomes greatly accelerated, and the 2,575,440,000 pulsations are performed in little more than half the ordinary term of human life. Life goes out in forty or fifty-five years, instead of seventy. This application of numbers to express the vital forces, is given to show that the acceleration of those forces diminishes the term of human life.

WITCH HAZEL—*Hamamelis Virginiana*.—This tree is a native of our country, and grows in loamy land. The bark is sedative and astringent. The taste is bitter, and leaves a pungent, sweetish sensation in the mouth. A poultice made of the inner rind of the bark is said to be efficacious in subduing painful inflammations of the eyes. It was a medicine much used by the Indians. Of the effect of it internally, but little or nothing is known. A tea of the leaves or bark is said to be employed in bowel complaints, and from their astringent nature, we should suppose it to be a suitable remedy.

WOLF—*Noli me tangere*.—See *Noli me tangere*.

WOLFSBANE—*Aconite*.—See *Aconite*.

WOMB.—The Uterus.—See *Uterus*.

WOOD NAPHTHA.—This substance is a colorless and somewhat fragrant liquid. It has a pungent, disagreeable taste, and the smell of tar-water. It has lately been introduced for the cure of coughs and incipient consumption. The use of this article has been attended with some success, and promises to be a useful remedy. From our own observation we think it worthy of a more extensive trial. The dose is from ten to twenty drops, given three or four times a day, in a little water.

WORMS.—A thousand remedies are given for worms when there are none present in the intestines. Not one case in twenty, where worms are supposed to exist by parents and friends, turns out to be true in fact. Worms are, however, the source of disease, and sometimes the cause of death. Those which infest the intestinal canal are of three kinds, the tape worm, the round worm, and the pin or thread worm. Besides these there is a long hair worm and a broad tape worm which sometimes, though very rarely, inhabit the bowels.

The round worm will grow to a foot in length. The tape worm will grow to twenty or thirty feet in length, is flat, half an inch or an inch wide, and is full of joints. It infests the upper part of the bowels and feeds on the chyle. It produces great emaciation of the flesh and an enormous appetite. The voracious appetite is probably occasioned by the immediate consumption of the chyle by the worm. It has been supposed that each joint of the tape worm will live independently, but this idea is erroneous.

The pin worm is never more than an inch in length, starts quick, and infests the lower end of the bowels, and sometimes, appears upon the outside. These worms produce an intolerable itching, and in children, are the occasion of convulsions and fever. The pin or thread worm is very white, and never appears to ascend higher in the bowels than the rectum and colon. It feeds on the mucus of the bowels; and, by destroying this, probably, produces costiveness. Indeed, all worms are fond of still water, if we may use the expression, and appear to require it in order to breed. Costiveness, stoppages, and indigestion appear to be necessary to the formation of nests for the worms to breed in. A brisk, regular motion of the bowels would no doubt always prevent their generation and abode in the bowels.

The round worm traverses the whole length of the alimentary tube, although its natural abode appears to be in the colon. It often ascends to the stomach, and sometimes will crawl up the gullet and come out of the nose and mouth. In the worst case of worms which we ever had, not more than twenty came away in the stools.

The symptoms of worms are very obscure. In children, troubled with worms, the appetite is changeable, but most commonly voracious. They crave sour, indigestible substances, such as unripe apples, currants, and cherries. The belly is hard and

swelled, and the bowels costive. There is more or less heat and dryness of the skin. The sleep is disturbed, and there is a dryness and itching of the nose, which causes children to rub and pick it. In their sleep, they are apt to start, and awake with pain in the bowels. They have a pale countenance, and the eyes are sunken, and sometimes purple underneath. The flesh becomes wasted and they are liable to convulsions. There is always a great irritation of the nervous system. There will often be a grinding of the teeth, foulness of the breath, and sickness of the stomach. Worms will sometimes bring on an oppression of the brain, and occasion symptoms resembling those of a dropsy of the brain.

The round worm and the pin worm mostly infest children between the time of weaning and that of puberty. The tape worm is more common to adults. The symptoms which manifest the existence of the tape worm are very nearly those which attend the presence of the round worm. We once had a case of tape worm of a foot and a half in length, which caused an indomitable vomiting for the space of three weeks. The woman felt the motion of the worm in her stomach, but it was not discharged until she took several doses of the columbo-root tea, which destroyed the worm, when it was thrown up in the act of vomiting.

Domestic Remedies.—All bitter substances are poisonous to worms. Worm-seed is a good medicine for small children. Mixed with molasses, it may be given in the dose of a tea-spoonful, twice a day. The dose for an adult is a tea-spoonful and a half of the seed. Wormwood tea is a destroyer of worms. Thoroughwort tea, or any strong physic, will dislodge worms.

The medicine which we have often used for round worms, and which we consider one of the best, is five grains of calomel and five of rhubarb mixed with molasses and given at a dose. This is a suitable dose for a child from one to four years of age. To older children the dose may be doubled. Pink and senna is a very sure remedy. An ounce of each should be steeped in water, and a quarter of the liquor given at a time, once a day, for four days in succession.

For the tape worm, and also the round worm, the most powerful medicine is the spirits of turpentine. A half table-spoonful mixed with milk may be given to a child between two and seven years of age, for a number of days in succession. Adults may take two table-spoonfuls at a time. Mixed with an equal portion of castor-oil, the turpentine is thought by many to operate more effectually. The cowitch, both for the tape and the round worm, is often employed.

The pin worm may be destroyed by a dose or two of the elixir pro, or a pill or two of aloes. An injection of aloes dissolved in warm water will dislodge them. Aloes is a sovereign remedy for this kind of worm.

WORMWOOD.—This is an excellent domestic bitter. In a dose of half a drachm or a drachm of the powdered tops, it will

destroy worms. Children may take, for the same purpose, from ten grains to half a drachm.

In dyspepsia, hypochondrism, and stomach complaints, a tea made of wormwood, and drank just before each meal, will do more good than almost any other remedy. It strengthens the tone of the stomach, improves the appetite, and frees the kidneys.

WOUNDS.—Wounds are divided into several different kinds, which take their names from the manner in which they are produced, and the particular part injured. Those which derive their names from the manner in which they are produced, are incised or cut, lacerated or torn, contused or bruised, punctured, gun-shot, and poisoned wounds; and some of the principal of those named from the parts injured, are wounds of the arteries, of the head, throat, thorax, abdomen, joints, and tendons. Each of these kinds of wounds requires some peculiarity of treatment, which it is our intention to briefly point out in the following article, taking the standard authorities for our guide in those cases with which we are not familiar.

The simplest and most common wounds are those made with cutting or edged tools, such as the knife or chisel, and scythe. In these wounds, the principal injury done to the parts is the mere division of the fibres of the flesh, without any contusion or laceration. They are not liable to inflame, suppurate, ulcerate, or slough, under favorable circumstances, and, if properly treated, generally unite very readily. The first thing to be attended to in this, as well as most other kinds of wounds, is the bleeding. Should there be considerable bleeding, it must be stopped before any permanent dressings are applied. Bleeding from veins and small arteries may generally be arrested by a little pressure upon the wound with sponge or soft cloth; but if a large artery be divided, it will require firm pressure upon the wound, or on the main trunk of the artery above it. When an artery runs over a bone, there will be but little difficulty in stopping the bleeding by compression; but if the parts underneath it are soft, it will be done with more difficulty. Large arteries will require to be tied, or dangerous bleeding may be the consequence. Small pointed forceps, or a tenaculum, is commonly used in taking up the end of an artery to tie it, but a needle, annealed in the blaze of a lamp and the point bent into a hook, will be found a good substitute for the tenaculum. By wiping a wound and observing the source of the blood, the end of the artery can often be seen, and seized, when it may be drawn out and tied with a small ligature of silk. The blood from an artery is very florid and flows in jets; from a vein, it flows more slowly and steadily, and is of a darker or purple color. When a ligature is applied to an artery, one end of it should be cut off near the knot, and the other left long enough to hang out of the wound at the most convenient place, between the plasters, in order that it may be withdrawn after the artery has closed and sloughed. The veins never require tying, as bleeding from them can be arrested by compression

upon the wound. Wounds frequently, perhaps generally, occur under circumstances, and in situations, where it is impossible to obtain assistance and the conveniences for dressing them. For instance, it is not unusual for a man who is chopping in the woods or mowing in a meadow at a distance from any habitation, to cut himself with an axe or scythe, and perhaps sever a large artery. The blood flows rapidly, he soon faints, and is unable to regain his home or get to any place where assistance can be rendered him; or should he be barely able to drag himself along, the bleeding will be increased by the exertion, and when he arrives, his system is exhausted, and he lies many weeks or months before the wound heals and his blood-vessels are replenished. Under these circumstances, the wound should be seized with one or both hands, the sides be brought together, and firm pressure made upon it, which will in a measure check the bleeding. A compress, made of a folded handkerchief or a portion of some garment, should be applied, and bound on by tying a handkerchief, a strip of cloth, or a cord, tight around it. If this should not succeed, a part of a handkerchief, a piece of cotton or linen cloth, or other soft substance, such as tow or lint, may be crowded into the wound, a compress applied over it and bound on as before. The puff-ball, a kind of agaric, is often used for this purpose with much success, by people in the country. The constant application of snow, ice, or cold water, very much aids other means in stopping bleeding. The loss of blood may sometimes be prevented by thrusting the finger or thumb into the wound and pressing it upon the part from which the blood seems to flow, and by pinching between the thumb and finger the mouths of the vessels. The blood from an artery will always come from the side of the wound which is towards the heart, as it flows from this organ in the arteries and towards it in the veins. When the wound is on the arm or leg, the surest and sometimes the only means of stopping the bleeding from an artery, is by a ligature around the limb above the wound, which must be drawn tight enough to stop entirely the circulation, so that no pulsation can be felt in the arteries below. A moderately tight ligature around a limb will increase the bleeding from the veins, and will not lessen it from the arteries, as is daily witnessed in the operation of bleeding. A silk handkerchief, a strip of strong cloth, or a cord, may be used for this purpose, and it should be so applied that a stick can be passed under it, by which a twist may be taken powerful enough to stop the circulation of the blood in the limb. The best place to apply a ligature on the arm or leg is near the body, and a compress of folded cloth over the principal artery, which is on the inside of the limb, will insure the success of the operation. As by entirely stopping the flow of the blood in a part for any considerable length of time would produce swelling and serious consequences, other measures should be immediately taken to secure the arteries permanently. It should be observed that the introduction of any foreign body into a

wound to stop bleeding is only to be resorted to in extreme cases, in which nothing better can be done, as, by preventing the wound from being accurately closed, the healing process will be retarded. When such means are necessarily used, it should only be for a short time, until more suitable remedies can be employed. The bleeding being stanchd and proper assistance and suitable dressings obtained, all foreign substances should be removed, the wound cleansed and closed, and there will still be a chance for union by the first intention to take place. The object to be attained in dressing a wound is to favor its healing immediately, and without the formation of matter. When a wound heals in this manner, it is said to heal by the first intention. As it is evident that a wound cannot heal by the first intention unless its sides are in contact, the propriety of accurately closing it, and retaining the parts as nearly as possible in their natural situation, by plasters and stitches, must be manifest to every one. When the edges of a cut wound are retained in close contact with each other, it is not unusual for it to unite in a few days; but if allowed to remain unclosed, and filled with lint and salves, or spirits, as many weeks will be required for it to fill up and close by the tedious process of granulation. The best way to hold the sides of wounds together is by strips of sticking plaster. Before the plasters are applied, the wound and skin around it should be wiped dry, in order that the plasters may adhere firmly. The plasters should be cut into long, narrow strips, which should be warmed as they are applied. In applying the strips, one end should be attached at a little distance from the wound on one side; the wound being held together, the plaster should be carried over it in such a manner as to hold the edges in accurate and close contact. If the wound be long, several strips should be used, and a very narrow space left between them for the escape of the blood that may ooze from the wound, or the matter, should any form before they are removed. A pledget of lint or soft cloth should be applied over the plaster, and the whole secured by a bandage, which ought not to be so tight as to impede the circulation, except it may be necessary to keep up some degree of compression for a short time, to guard against a return of the bleeding. If the wound does not bleed much, nor inflame and swell, the dressing will not require to be removed before the sixth or seventh day. Care should always be taken that the wound be not closed over a large clot of blood, as this will prevent it from healing inside, and if it unite externally, it will require to be reopened and the cure will be rendered tedious. When the dressings are removed, great care must be taken that the wound be not drawn asunder, should the adhesion be imperfect, for an accident of this kind would at least make the healing process doubly tedious, if it did not excite inflammation. To avoid this, the plasters should be peeled off in a direction lengthwise to the wound. One strip only at a time should be removed, and if the union be not perfect, the wound may be wiped clean and a fresh

one applied before another is disturbed. When a wound heals kindly by the first intention, one or two dressings are all that are necessary; but if it suppurate, it will require to be dressed daily, and to be cleansed each time with castile soap suds or spirits and water. If it be disposed to gape and is not much inflamed, the adhesive plasters may be continued, by which it may be gradually drawn together, and the discharge of matter will thereby be lessened and the scar diminished. Should there be much inflammation and swelling, the plasters must be taken off and the wound poulticed until the inflammation is subdued, after which it may be dressed with the simple cerate or other mild salve, upon lint or old muslin, until the cure is completed.

Some incised wounds are so large, or the sides are drawn so far apart by the contraction of the flesh, that they cannot be brought together and retained in proximity without the use of stitches, called by surgeons, sutures. When it is necessary to close a wound by sutures, the thread or ligature should be small and no more stitches taken than are absolutely necessary to fulfil the indication, and they should be removed in six or seven days, or as soon as it can be done without endangering a reöpening of the wound. When suppuration takes place, the stitches should be removed, as they can no longer answer any useful purpose, and will add to the irritation and increase the difficulty of curing the wound. If a wound is angular, a stitch should be taken in the angle and the plasters so applied as to aid it in holding the parts in a natural situation; or, if the suture appear to be sufficient without the plasters, they may be omitted, and the sore dressed with simple cerate and light dressings. In most wounds, however, the sticking plasters will be the most suitable dressings, even when the sutures are employed. We have the best authority for the opinion that sutures, if not too large or too numerous, do not prevent a wound from healing readily and kindly.

Wounds on the face should be dressed with great care, in order to prevent an unseemly scar.

The sooner a wound is dressed, the greater will be the chance of its healing by the first intention, or without suppurating.

"Parts which are nearly separated readily unite, as the finger or nose where it has been cut or torn, and a suture is required to aid its union. Parts entirely separated will sometimes unite. When adhesion of an incised wound can be completely effected, the danger ceases. An incised wound into the abdomen, exposing its different viscera, is not followed by danger if the wound is made to unite. Wounds of the chest, even complicated with injury to the lungs, cease to be dangerous under the adhesive process. Wounds of the brain will unite by adhesion, and the patient recover."

The above facts, quoted from the highest English authority, show the propriety and enforce the necessity, of always endeavoring to effect, if possible, the union of all incised wounds by the first intention.

Lacerated or Torn Wounds differ from cut wounds in the greater amount of injury done to the parts by the violence which has produced them. The flesh is generally more or less contused or bruised, and its vitality, and consequently its aptness to heal, diminished. These wounds are often produced by machinery and such implements and substances as tear the fibres asunder, and great force is therefore required to produce them. Torn wounds, of whatever magnitude, seldom bleed much. Even large arteries may be torn asunder without occasioning any dangerous loss of blood. We have, in several instances, seen an arm torn in pieces, and one completely torn off above the elbow, with less bleeding than sometimes attends a cut finger. In dressing these wounds, however, should there be bleeding, the first thing to be done will be to arrest it, by compression,—a ligature above the wound if it be upon a limb,—by tying the artery, or other means, as pointed out under incised wounds. It frequently happens that extraneous bodies, such as pieces of stone, wood, glass, or iron, are imbedded in a wound of this kind. These should be carefully removed, if practicable, and the wound cleansed and bathed with laudanum or spirits, before the dressings are applied. Lacerated wounds seldom entirely heal without maturing, or by the first intention, and are much more liable to inflame than those produced by cutting instruments; but this should not deter us from attempting to produce a union of as large a portion of them as is possible, by approximating and retaining the torn edges by plasters and bandages. Sutures are seldom necessary, except, perhaps, upon the face. We have often used them upon the face, and particularly over the eye, when a flap of the wound was hanging down, and difficult to keep in place, with great advantage, the wound healing kindly and leaving only a small scar. It is not necessary or practicable, in applying sticking plasters to lacerated wounds, to retain the edges in such accurate and close contact as in cut wounds, and wider spaces should be left between the strips, though the more perfectly this can be done at the first dressing, without violence or impeding the circulation, the sooner will union take place, and the less will be the deformity. If one half or one third of the wound adhere by the first intention, it will shorten the time required to heal it, and lessen the amount of purulent discharge,—a consideration of some importance in large wounds. The dressings should be light and the bandages easy. Tight bandages impede the circulation, prevent the restoration of healthy action, and thereby increase the danger of sloughing. If the wound be painful, the dressings may be saturated with cold water, laudanum, a solution of opium, spirits of camphor or rum; and if it swell, and the dressings become uncomfortable, they must be removed, being careful not to tear apart the wound and break up the adhesions that may have formed. This kind of wounds often requires, after a few days, to be poulticed, in order to favor the suppurative process and subdue the inflammation. Even in the beginning, when it is not deemed necessary or proper to

attempt a union by the first intention, such wounds will do well under the use of soft bread and milk poultices. The poultices should be changed often, and if the sore discharge matter, it should be frequently cleansed with warm suds and spirits. After the inflammation has subsided, some kind of salve may be applied, or adhesive plasters be used, and the wound gradually closed by drawing the edges near together. During the healing process, in those wounds in which it is desirable to avoid deformity, the sticking plasters are particularly useful. They should be so applied, as to constantly draw the flesh together into its natural situation. Torn wounds are often painful, and when large, a severe shock is given to the nervous system, and locked-jaw may be a consequence. With the view of allaying irritation, easing the pain, and preventing any serious effects upon the nervous system, a full dose of laudanum or other anodyne should be taken immediately on the receipt of the injury, and repeated as often as circumstances may require. Should there be appearances of gangrene, and a disposition to slough, the case must be treated with wild indigo, yeast, or charcoal poultices, a wash of chloride of soda, tonics, and a nutritious diet, as recommended in the article on Mor-tification.

Contused or Bruised Wounds are produced by blows and falls, which may not break the skin, but which severely injure the parts underneath. Contused and lacerated wounds are often complicated, but when the injury done to the flesh is considerable, and to the skin but little, no regard need be paid to the latter, and the case should be treated as a simple contused wound. Bruised wounds rarely bleed externally, but the blood often escapes from the injured vessels into the cellular substance and among the muscles, causing swelling and showing through the skin, which is the cause of the dark or "black and blue" color observed in these injuries. In very serious contusions the nerves are so deadened that the sensibility of the part is destroyed and the pain is less than it is in those that are less severe. When the bruise is not very severe, the blood which is effused into the flesh will be gradually absorbed, the color change to a brownish or yellowish, and finally disappear, the swelling subside, and a perfect restoration take place in the course of a week or two; but if the parts have been injured beyond a certain degree, the vitality being much lessened or destroyed, suppuration and sloughing will follow, and the breach of continuity be afterwards repaired by granulation and cicatrization.

The best applications to recent bruises are cold water, spirits and water, laudanum, ether, solution of sal ammoniac, salt and vinegar, or brandy, and other cold and stimulating washes. These stimulate the action of the vessels, hasten reaction, and promote absorption of the effused blood. When reaction comes on, if the wound is large and there is a tendency to inflammation, leeching and cathartic medicines will be the most suitable remedies. In those cases in which there is more or less laceration or breach of

continuity, and where suppuration and sloughing are to be expected, fomentations and poultices must be used to expedite these processes. After the suppurating or sloughing process is completed, the fomentations and poultices must be discontinued, and the sore treated as a simple ulcer. The general treatment will consist in giving opium to allay irritation, cathartics to keep the bowels free, and tonics to support the strength and favor the digestive and sloughing process. During the healing process, the sides of the sore should be approximated by adhesive plasters, as in lacerated wounds.

Punctured Wounds are those that are made by narrow, sharp-pointed bodies, such as the sword, bayonet, scissors, hooks, points of broken bones, stubs, pitchforks, awls, needles, forks, and various other substances and implements. They penetrate deep in proportion to the extent of the external opening, and are infinitely more dangerous than incised wounds. The fibres of the flesh are forced asunder, instead of being divided as by edged tools. Inflammation of the absorbent vessels extending to parts remote from the puncture, as from the hand to the arm-pit, or from the foot to the groin, is not an unfrequent consequence. Abscesses sometimes form in the track of the absorbents, and even in the glands in which these vessels terminate. The pain produced by punctures is sometimes intolerable, and serious nervous affections, and even locked-jaw, may supervene.

In the treatment of these wounds, the most important thing to be done is to relieve the pain and quiet the nerves, by the use of anodynes, both externally and internally employed. The wound should be bathed with laudanum or a solution of opium, and enough given internally to assuage the pain and compose the nervous system. If laudanum cannot be obtained, rum or some other spirits may be used as a substitute. In the mean time, if any foreign body have been left in the wound, such as a stub, or a portion of the instrument with which the wound was made, for instance, it should be removed immediately, if it can be done without a greater risk than would result from allowing it to remain.

It is recommended by some to convert a punctured into an incised wound, by enlarging the orifice with a lancet or other sharp instrument; and others advise the application of powerful caustics in addition to dilating the orifice. The nitrate of silver, nitric acid, and caustic potash, are used for this purpose. Stimulating and anodyne lotions to facilitate reaction, leeches and cold lotions to prevent or subdue inflammation, fomentations and poultices to promote maturation and granulation, are the remedies usually advised, according to the stage of the case. We are of the opinion, however, that a large proportion of punctured wounds may be successfully treated by the internal use of anodynes, and the immediate and constant application of warm poultices, saturated with laudanum or solution of opium. Fomentations with poppy-heads, hops, apple Peru, hemlock or henbane, may have

an effect equally as good as the poultices and opium. Should abscesses form, they should be opened as soon as the existence of matter can be ascertained.

Gun-shot Wounds partake of the character both of lacerated and contused wounds. The vitality of the parts in the vicinity of the injury is destroyed, and more or less sloughing is the usual consequence. They seldom bleed much, except very large vessels are divided. The hole made by the ball is rather less than the size of the ball, and its edges are generally of a livid color. A numbness or torpor of the limb, or of the whole system, is a common effect, but the symptoms differ materially in different persons. The difference in the velocity of the ball produces a difference in the symptoms. The edges of the wound where the ball enters are turned inwards, but if it passes through, the edges of the hole where it escapes are ragged and everted.

In the treatment of gun-shot wounds, there are three indications to be fulfilled. First, to remove all foreign or extraneous bodies; second, to prevent excessive inflammation; and third, to promote suppuration.

As the management of these wounds is very similar to that of lacerated and contused wounds, and is conducted upon the same general principles, it is deemed unnecessary to enter into particulars.

Poisoned Wounds.—Upon the subject of poisoned wounds we refer the reader to the articles on hydrophobia and poisons, and shall here only briefly explain what is meant by dissection wounds. It not unfrequently happens that, in dissecting, a person wounds himself with a scalpel or other instrument, and the wound is poisoned by the matter generated by the disease of which the patient died, or, more probably, by the putrefactive process. Pain and irritation, extending up the limb in the course of the absorbents, swelling and suppuration of the lymphatic glands of the arm or axilla, fever, and constitutional irritation, are often produced. The best practice, in these cases, is to cleanse the wound immediately with warm water, and suck it powerfully, to free it from the poison. Cauterization with caustic, potash, or liquid muriate of ammonia, is advised by the French surgeons; but the practice of the English is, after extracting the poison, to apply warm poultices, to keep the arm in a sling, attend to the diet and bowels, and to use tonics if necessary. Inflammation, arising from this cause, often continues a long time, and has frequently proved fatal.

Wounds of the Abdomen may be superficial, wounding the flesh only, without penetrating the cavity. These wounds are not dangerous, and are to be treated like wounds in other parts, by closing them with adhesive plasters, or sutures, and a compress and bandages. They may penetrate the cavity without wounding any of the internal organs. Extensive wounds of this kind are often recovered from, but are not free from danger. The symptoms peculiar to wounds which open this cavity are

vomiting, faintness, and an immediate and universal coldness and paleness. It is recommended to close these wounds by sutures, passing the needle deep among the muscles, but not through the peritoneum. "Between the stitches, strips of sticking plaster, or lint dipped in blood, should be applied. The patient should be bled from the arm and leeches applied, if there are symptoms of inflammation. Physic must not be given, nor should any solid food be taken for a number of days." A third kind of these wounds is where, besides penetrating the cavity, the intestines or some other internal organ is injured. The escape of the contents of the stomach, bowels, or gall bladder, is a sure sign that these organs are wounded.

Wounds of this description are almost always fatal, but an attempt should be made to save the life of the patient, by keeping him perfectly quiet and upon the lowest fluid diet, by the use of warm fomentations and emollient poultices, and the most vigorous employment of antiphlogistic remedies.

Wounds of the Chest, like those of the abdomen, are of three kinds: superficial, penetrating the cavity, and wounding the lungs or other viscera. Those which are superficial do not differ from common wounds, and are managed in the same manner, except when one of the arteries is divided between the ribs, when it will be necessary to press the fingers upon the mouth of the vessel until the disposition to bleed ceases, after which the wound must be closed with a suture passing through the muscles, but not the pleura or lining membrane. When the cavity is opened the breathing will be difficult, and air will be alternately drawn in and forced out through the wound with a hissing noise; there will be irritation in the larynx, cough, suffocation, extreme anxiety, and if the lungs be wounded, blood will be coughed up, which will be florid and frothy. In these cases air is effused into the cellular substance, at first in the vicinity of the wound, and often spreading to a considerable extent. The flesh has a crackling feel, like parchment. This symptom is called emphysema. When the lungs are wounded the patient may die from the loss of blood, inflammation, or emphysema.

While the bleeding continues the wound should not be closed, as the blood in the cavity of the chest may occasion irritation and inflammation. If the loss of blood from the wound or the mouth is not very great, it will be proper to bleed largely from the arm, both as a means of arresting the hemorrhage and of preventing inflammation. Sir Astley Cooper says: "There is but little danger of bleeding too much in one of these cases, as it is an object not only to diminish the flow of the circulation, but the quantity of blood in the pulmonary vessels." Should inflammation terminate in an effusion of pus or bloody serum into the cavity of the thorax, it may be drawn off by the operation called paracentesis. Emphysema is less dangerous than inflammation. The treatment consists in applying a bandage around the chest tight enough to prevent any crackling during a deep inspiration. Very small

punctures may be made in the cellular tissue, and the patient should lie on the wounded side. The most perfect quiet is essential to recovery in all cases of wounds of the chest or lungs.

Wounds of the Throat are often made in attempts to commit suicide, and may sometimes occur accidentally. When, in these wounds, the carotid arteries are divided, death almost immediately ensues; but as the incision is generally made high up, where these arteries are very deep, these vessels, in a great proportion of instances, escape, and the pharynx, larynx, trachea and œsophagus are the principal parts wounded. Wounds in the throat should be closed by several sutures, after securing the blood-vessels and stopping the bleeding. The sutures should be put through the integuments, and sticking plasters applied to assist in retaining the sides of the wound together. The head must be brought forward upon the chest; but little of anything should be swallowed; the mouth should be frequently moistened with lemon dipped in water, and the patient be supported with glysters of gruel or broth, to which opium or laudanum is added, to prevent them from returning. Where food can be given by the mouth, jellies will be the most suitable, and a little solid food will excite less irritation than liquids. At the end of a week the stitches should be removed, but the plasters ought to be continued until the wound is perfectly healed. Wounds that divide the trachea low down on the neck, and those in which the œsophagus is injured, are more dangerous than those which are higher up, and those in which the œsophagus escapes. Sutures should be used in these cases, but plasters are objected to, as they prevent the discharge of the blood and air in coughing, and thereby produce additional difficulty of breathing and occasion emphysema.

In extensive wounds of the pharynx, in which the ability to swallow is entirely destroyed, the stomach-pump may sometimes be used with great advantage in supplying the patient with nourishment. A case of this kind was successfully treated not long since, in this city, by the use of this instrument. The objection to the stomach-pump, in ordinary cases, is that it is necessary to throw the head back in order to introduce the tube, which is liable to prevent or break up adhesions of the wound.

Wounds of the Tendons.—The frequency with which the tendons have of late been divided by the operation of tenotomy, for the correction of deformities, and the infrequency of any serious effects following the simple division of them accidentally, have led to the conclusion that these wounds are not as formidable as was formerly supposed. Punctured and lacerated wounds of the tendons sometimes produce serious nervous affections, and rarely locked-jaw, but the mere division of them is unattended with danger, and the only consequence, in addition to the effects of wounds in general, is the loss of motion for a short time in the part to which the tendon is attached. It has been found that when a tendon is divided the ends are separated to a greater or less extent by the contraction of the muscles, that the space is

filled up with a new substance, and the motion of the part restored in the course of two or three weeks. Sir Astley Cooper recommends, when the tendons are divided, that the ends be approximated by the posture of the limb, which must, in order to effect this, be retained in a more or less restrained position until the wound heals. When the heel-cord, — tendo Achilles, — is divided, for instance, a high-heeled shoe, straps, and rollers, are advised to keep the heel up; the wound in the skin is then to be closed, all pressure avoided, and cooling lotions applied; a contraction of the muscles takes place during the healing process, and the heel continues to be drawn up after the wound has united. To remedy this deformity, the heel of the shoe is gradually lowered, until finally the muscles and tendon are sufficiently stretched to allow the heel to come down to a level with the foot. This may all be necessary, but we apprehend that raising the heel much above a level, and keeping the foot in this uncomfortable position, is productive of no essential benefit, and that all that is required is to prevent the heel from falling too low, by which the tendon would be elongated, the heel lowered, and the toes raised. When the tendons are divided by a cutting instrument, the wound over them should be accurately closed, and the union by the first intention in every way promoted. The limb, while the wound is healing, should be kept in the easiest and most natural position, so that no deformity or inconvenient position will be left when the cure is completed.

The heel-cord, and several other tendons and muscles, are sometimes lacerated by violent efforts and strains. In these cases, as there is no external wound, all the treatment necessary is to keep the limb in a proper position to prevent deformity, and to guard against inflammation by the ordinary means. Lacerated, bruised, and punctured wounds, in which the tendons are injured, must be managed according to the general principles of treating these kinds of wounds. We would recommend, in all wounds of the tendons and other deep-seated parts, in which there is an opening in the skin and flesh covering them, that the external wound be closed as soon and as accurately as the circumstances of the case will permit, with the view of preventing the action of the air upon parts that are not accustomed to it, as this is undoubtedly one of the principal causes of inflammation. It is now a well-established fact that tendons and muscles heal in a very short time, and without any considerable degree of inflammation, when divided under the skin, through a small valvular opening.

Wounds of the Joints, penetrating the capsular ligaments, are trivial or dangerous, very much in proportion to the skill that is exercised in treating them. "If the patient has a poultice applied, or if the utmost attention is not paid to the immediate closure of the wound, inflammation of the synovial membrane arises, and suppuration ensues. The most violent constitutional irritation succeeds, shivering, heat, flushing, and profuse perspiration; generally great swelling and excessive pain in the joints.

Abscesses form in different parts of the joint, one succeeding another, until the strength becomes exhausted." In young and healthy persons these wounds are much less dangerous than in those who are weak or advanced in life. Wounds of the joints, when improperly managed, are tedious in healing, and a stiffness of the joints, or ankylosis, is the usual consequence; but, says the author above quoted, "All ill effects from wounds of joints may be prevented by care and skilful treatment." The wound should be closed with a needle and thread, passing through the skin only, and bringing the edges perfectly together. A pledget of lint dipped in blood is then to be applied over the surface of the wound, and over this the adhesive plasters. The joint must then be covered with soft linen moistened with lead-water or spirits and water, a splint applied to the limb to prevent its motion, and a roller bandage to confine the other dressings. "The bandage must not be so tight as to impede the circulation or press too much upon the wound.

"Purging medicines should be as much as possible avoided, and a rigid abstinence enforced. In eight days the thread may be cut and drawn away, but the adhesive plaster and lotion should be continued. Three weeks should elapse before the patient be allowed to quit the bed." Inflammation and suppuration, should they ensue, must be treated as in other cases. Should a stiffness in the joint remain, frictions with oily liniments, exercise and motion of the limb, persevered in for a long time, will be the best means of restoring it.

Hard, cartilaginous substances are sometimes met with, loose in the knee joint, giving rise, at times, to lameness and inflammation. These can only be removed by an operation. We removed one, nearly an inch in length, some years ago, and a perfect cure was effected in a few days.

An escape of the synovial fluid, either in an operation or an accident, is of trifling importance, provided the wound be immediately closed, as it soon reaccumulates.

Wounds of the Arteries and Veins.—As this part of the subject has been anticipated under the head of incised wounds, where all has been said that would interest the common reader, we shall conclude the subject of wounds with a few observations upon injuries of the head.

Wounds of the Head may be simple and limited to the scalp; the skull may be fractured, or the brain be injured, without any wound of the external parts. Wounds in the scalp will require no peculiarity of treatment, except an artery be cut, in which case it is often difficult to stop the bleeding. It is rarely necessary to take up an artery in this situation, and very difficult to find it, should it be attempted; the bleeding must therefore be arrested by compression, by completely severing the artery with a lancet when it is not entirely divided by the wound, which will allow it to retreat within the flesh, or by a suture. The last is the mode which we have generally adopted, and have found nothing neces-

sary but to apply a compress and the ordinary dressings, except in wounds of the temporal arteries, which can commonly be tied without difficulty. The stitch should be taken deep in the scalp, and the wound firmly closed, which will usually stop the bleeding. After the bleeding has ceased, the ordinary dressings may be applied.

When the skull is fractured, it may or may not be followed by symptoms of compression of the brain; in the latter case all that will be required will be to guard against inflammation by bleeding, cathartics, and antimonials; but if there be compression of the brain, indicated by a slow pulse, dilated pupils, squinting, stertorous breathing, stupor or complete insensibility, the operation called trepanning, by which the depressed portion of bone is raised, will be advisable.

We frequently see cases, occurring from falls and blows upon the head, in which the patient is stunned, and more or less completely deprived of sense and the power of motion. In these accidents, vomiting is a common symptom; the patient is insensible, or is aroused with much difficulty; there is loss of memory and aberration of the mind. Immediately after the receipt of the injury, the countenance is pale and deathlike, the pulse slow, soft and small, all the powers of life are depressed, and a violent struggle of nature is required to bring on action and restore the vital functions.

Under these circumstances, the common practice has been to bleed; and if the patient do not recover, it is attributed, by the lookers on, to his not being bled enough; and the physician, who would pursue the most rational practice, can hardly act in accordance with his own judgment without danger of losing his reputation. The use of the lancet too early is unquestionably a great error in practice, and productive of serious consequences. A celebrated author, after strenuously recommending bleeding as a means of preventing and curing inflammation, says, "But do not go on to bleeding largely, for you would by this means reduce the strength of your patient too much, and prevent the reparative process of nature. You are to use bleeding as a means of preventing inflammation, *not as a matter of course*, the moment you are called to a patient under concussion. You will always find the pulse very weak and scarcely perceptible at the moment of the injury; *wait till the pulse rises and reaction is indicated*, and then extract blood." And further, he says, "Do not extract blood indiscriminately; use the lancet with caution, lest you reduce the animal powers too much, and evade a favorable termination of your case." We have been induced to make these observations and quotations, which apply equally well to all serious concussions of the body, as well as of the brain, in consequence of having frequently been urged to bleed, and having seen bleeding practised, under circumstances in which cordials and stimulants were in our opinion the more appropriate remedies, and with a view of correcting in some measure a very prevalent popular error. In concus-

sions of the brain and other important internal organs, perhaps the most rational mode of practice is to use cordials and stimulants, both externally and internally, if the patient can swallow, until reaction comes on and the pulse rises; then to employ bleeding, cathartics, and antimonials, derivatives and counter-irritants, as the circumstances of the particular case may indicate.

Y.

YAWS—Frambæsia.—This disease consists of an eruption of pustules upon the skin, preceded by a slight degree of fever. It is supposed to have been imported from Africa, and never affects the same person but once. It is not one of the diseases of New England.

The yaws comes on with pains in the joints, languor, and loss of strength, and for some days resembles an attack of rheumatism. The pustule is at first of the size of a pin-head, and increases to that of a ten-cent piece or ninepence. The pustules are, in the first place, filled with a watery fluid, which becomes thick and tough, and settles into a thick scab. They sometimes degenerate into a fungus resembling in appearance a mulberry. The pustules appear in successive crops, beginning in the face and neck, and extending down to the legs; and every new crop excites a new degree of fever. When the disease has reached its height, one pustule will commonly become much larger than the rest, equalling the size of a half dollar, and turn to a foul, running ulcer; it eats deep into the flesh, and sometimes affects the bone.

The affected person should be separated from the well, and fed on a light vegetable diet. In the commencement of the disorder a gentle emetic may be given, followed by eight grain doses of pulvis antimonialis, once in three hours. The sal nitre, sweet spirits of nitre, and the acetate of ammonia, are each of them suitable to give during the febrile stage. The bowels should be kept open with gentle doses of salts, magnesia, or rhubarb, and the skin well bathed with warm water. If the irritation of the eruption becomes severe, the Dover's powder must be given. The chief reliance in the early stage of the distemper should be upon sweating medicines. The spurge laurel or mezereon is a good medicine in this disease.

YEAST.—This article is often employed as an antiseptic in putrid fevers and inflammatory diseases. It contains a quantity of the carbonic acid gas, which is probably the active principle. Two table-spoonfuls of it may be given every two or three hours. It is easily made, by mixing with boiled, mashed potatoes, when they are half cold, a cupful of yeast, and allowing it to stand two or three hours. Where a putrid state of the throat or bowels is apprehended this simple remedy may be of great service.

YELLOW FEVER—**Black Vomit**.—This fever, for the most part, prevails in the sultry islands and territories which lie between the tropics. It, however, prevails more or less every year in New Orleans, Pensacola, Mobile, Natchez, and all the more southern states of the Union, and occasionally travels as far north as Virginia; but seldom visits the cities farther north. Two or three times, in the course of fifty years, it has prevailed in the cities of Philadelphia, New York, Providence, and Boston. In the states of Vermont, New Hampshire, and Maine, and in the British provinces, we believe, it has never prevailed. To people unacquainted with the disease, it is much more terrible than where it is an annual epidemic.

Many physicians believe the yellow fever to be only an aggravated form of the remittent or bilious fever, rendered malignant by some peculiarity of the season and vitiated state of the atmosphere; while others regard it as a distinct disease produced by a specific morbid exhalation from the earth and the substances which cover it. Where it is an epidemic, or prevails to a great extent, it is very evidently contagious; though, in scattering cases of it, it does not appear to communicate itself to others. In low, marshy places, and in cities built on alluvial soils, or soils which have been washed up from the bed of rivers or from the sea, and on new-made lands, this fever commonly originates. In hot, sultry seasons, with a stagnant atmosphere, and after the fruits of the climate have ripened and begun to decay, it is more apt to arise than in cooler and drier seasons. Cold and frost appear to have the power of checking its progress at once, and of putting an end to it. Its origin is very generally attributed to marsh miasm, or a noxious exhalation from the earth. And when the disease has once been produced from this cause, a matter is generated in the human body which will propagate it independently of the miasm itself, though both causes almost always combine where the fever becomes an epidemic.

The indisposition which ushers in an attack of the yellow fever does not differ materially from the symptoms which attend the commencement of all fevers. A sudden loss of strength and a constant restlessness will generally be felt a day or two before a complete fever is formed, though this warning is not always given of its impetuous onset. Faintness, swimming of the head, chilliness, and shuddering, are the ordinary forebodings of an attack of the yellow fever. There soon follows great heat, dryness of the skin, throbbing of the arteries, want of breath, flushings of the face, white tongue, tinged with yellow, unquenchable thirst, retchings of the stomach, pains in the head and back, and a quick and generally full and strong pulse, a sickish, sinking sensation at the bottom of the stomach, vomiting of bile, a deep-colored urine, sometimes plentiful, and at others scanty.

This state of things will continue one, two, or three days, before an abatement of the symptoms takes place; and this abatement will commonly only be of some of the symptoms, while new ap-

pearances will arise. The heat in a degree subsides, and often a deceitful tranquillity ensues. The eyes and skin become yellow, and great discharges of bile take place from the stomach, and sometimes from the bowels; the bile will be sometimes of a natural, but oftener of a greenish or black color; the tongue in some cases will be dry and black or yellow, and at others moist. Delirium is often though not a constant symptom of the black vomit; costiveness is nearly a constant attendant. The vomiting of a black matter, of the appearance of coffee-grounds, is the most distinguishing symptom of this disease. The yellow color of the skin is also a peculiar symptom, but not quite so constant. These two symptoms render the disease sufficiently remarkable not to be confounded with other fevers. Sometimes a copious perspiration puts an end to the disease, and at others, quiet sleep, bleeding from the nose, or a looseness of the bowels.

The unfavorable appearances are, a sinking of the pulse, cold clammy sweats, a constant retching without being able to vomit, torpor of the brain, hollow, sunken eyes, oozing of blood from the mouth and nostrils, and twitching of the muscles. It will sometimes destroy the patient in twenty-four hours. In hot climates, it runs its course in four or five days.

Domestic Remedies.—The most powerful remedy which can be made use of in the commencement of the disease, where no chilliness is present, is the affusion of cold water over the body, either by means of a shower bath or a wet sheet. When the fever is high this cannot be done too constantly or perseveringly. Cold water may be given for drink, and a dose of the Rochelle powders to operate upon the bowels. Ten grains of calomel and ten of jalap is a cathartic which has the highest repute in the cure of this disease of any medicine which has ever been used. This dose is commonly given every day until some improvement of the symptoms appears. Acid drinks and the soda powders are given to quiet the stomach; blisters and mustard poultices are applied for the same purpose; and sometimes stupes, or cloths wet with warm water, with thirty or forty drops of laudanum. Where the vomiting is severe and the first rage of the fever is over, injections of water gruel, with fifty or sixty drops of laudanum, should be administered every six or eight hours. To relieve the headache, a large blister should be drawn between the shoulders, and the feet thoroughly bathed in warm water. Cold applications of vinegar and water, or of ice-water, should be constantly made to the whole head.

The nourishment, where any can be given, should be barley-water, gruel, arrow-root and toast-water. Where great debility and prostration of the strength exist, wine will be necessary and proper.

Professional Remedies.—From all the evidence which we can collect upon this subject, it appears that bleeding is not, in general, necessary or salutary. Where the symptoms are decidedly inflammatory, bleeding, as in any other fever, will be required; but

the strength and degree of all the symptoms must be the only guide. The physician should not bleed merely because it is the yellow fever or the black vomit. If the pulse is hard, full and strong, and the febrile symptoms all run high, blood taken from the arm, and the operation repeated two or even three times, if benefit results from the first bleeding, should be tried. There should be a gentle evacuation of the bowels daily. Emetics are for the most part condemned as productive of mischief. Effervescing draughts, camphor, ether, and ammonia, administered frequently and in small doses, cold bathing, blisters to the head, and mustard poultices to the feet, with anodyne injections to quiet the stomach, and a gentle ptyalism by the use of small doses of mercury, are the chief remedies which have been found effectual in the black vomit.

The greatest cleanliness should be preserved, and the air of the sick room frequently changed. The chloride of soda or of lime should be evaporated in the room, and the attendants should take frequent airings. In the earliest distinct remission of the disease the quinine should be given, unless its use increases the fever. But the chief object should be to tranquillize the stomach, and to turn the flow of the bile downwards by every means which may be compatible with the strength of the fever.

YELLOW GUM—*Icterus Infantum*.—The yellow gum is a yellowness of the skin, attended with sleepiness, languor, and sometimes a disinclination to nurse, and is a disease of infants soon after they are born. It rarely ever occurs after they are a month old. Like the red gum, it only continues for a few days, and then disappears. It is sometimes fatal, but, in general, requires but little medicine. It is probably owing to a superabundance of the bilious secretion, which is probably excited in consequence of some disagreement of the mother's milk, or the cow's milk, with the stomach of the child.

A little rhubarb, magnesia, or castor-oil, should be given to the child every day, as long as it is disinclined to nurse. A weak solution of the super-carbonate of potash or soda should be given where the yellowness and drowsiness continue obstinate. A few tea-spoonfuls of mild thoroughwort tea, administered every day, for three or four days in succession, will remove the disease. In dangerous cases, it will be advisable to give half a grain or a grain of calomel, to excite the biliary ducts to carry off the bile. In this affection, the water of the child will often be tinged with yellow, as well as the skin and the whites of the eyes. The whole system appears to be impregnated with the bile. Medicines which purge or drain the bowels are the only ones which appear to be of much service. If a diarrhœa attends the affection, Godfrey's cordial or paregoric must be used.

YELLOW ROOT—*Zanthoriza*.—This shrub grows in the Southern and Western States. The stem is of the size of a goose-quill, and two or three feet high; it is ligneous and of a bright-yellow color. The root is horizontal, and from a foot to three

inches in length. In its properties it resembles the quassia, columbo, and other simple bitters, and is used for the same purposes. The dose is from one to two scruples.

There is a shrub found growing in this vicinity known by the name of yellow-root. This has a woody stem varying in size from that of a goose-quill to an inch or two in thickness, and rising to twenty or thirty feet in height, with a very gradual taper, being nearly of an equal thickness for many feet. It winds itself spirally around trees or other objects so closely that it is difficult to remove it. The bark of the root is of a bright-yellow color, and is much used, prepared in an ointment with lard, for the dispersion of inflammatory swellings, particularly of the breasts. This shrub or vine somewhat resembles the ivy, and is sometimes mistaken for it. We have seen a number of cases of poisoning, in one instance of a whole family, occurring from this mistake.

Z.

ZINC.—This metal in its pure state is of a whitish color, nearly resembling lead. In its metallic state it is not used, but in that of oxide and combined with acids, it is employed extensively. The zinc ore is found in England, Hungary, and in other countries. The sulphate or white vitriol is the preparation of zinc principally used in medicine. One of the most wonderful things in the art of medicine is, that an inert metal can be converted into an active and efficacious remedy; that, by dissolving zinc, copper, or iron, for instance, in oil of vitriol, a potent emetic can be elaborated. Many of these things, perfectly familiar to us, were hid in darkness but a few ages ago.

RECOMMENDATIONS OF THE WORK.

THE cordial and flattering commendations bestowed upon this work by numerous private individuals, it is needless here to introduce.

The following are among the *public* notices which have been taken of it:

The Boston Medical and Surgical Journal speaks of it in the following terms. This journal, edited by J. V. C. Smith, M. D., has probably the largest circulation of any in the country.

New England Popular Medicine.—This is essentially a medical dictionary, embracing popular names of diseases, and of articles prescribed as remedies by physicians. If it has any advantages over other works on popular medicine, (and we believe it has over most,) it should take the precedence of them. One reason which we can readily assign for feeling more respect than is ordinarily manifested for such kind of books, grows out of the fact, that a venerable and respected contributor to the pages of this journal, David B. Slack, M. D., assisted in the compilation. Nothing that would compromise the dignity of the profession to which he belongs, or mislead the unlearned who may consult the volume bearing his name, would be likely to flow from his pen. An examination of some of the leading articles, where the authors were obliged to exercise their ingenuity to make themselves clearly understood by persons wholly unacquainted with the ordinary language of medical science, the technicalities of which have necessarily been cautiously avoided, shows that they have succeeded admirably. It is our impression, too, that practitioners may here find much to admire, if they can get over the idea that when a description of diseases, or the remedies employed for subduing them, are popularized, they are unworthy of their consideration.

From the [Boston] Journal of Health.

New England Popular Medicine. A Work in which the Principles and Practice of Medicine are familiarly explained. Designed for the Use of Families in all parts of the United States. By GEORGE CAPRON, M. D., and DAVID B. SLACK, M. D. Stereotyped by George A. Curtis. Boston: 1847.

Some time since, we noticed a recommendation of this work in the Boston Medical and Surgical Journal. We had not then seen it, but we felt well assured that it was a valuable book, from the fact that it was endorsed by that venerable and careful journal.

The work before us is carefully prepared by scientific and practical men, and well adapted to the wants of the multitude. Such a work seems desirable and necessary. The people have too little information on these subjects; and we are pleased to see light scattered abroad upon these matters. Though much has lately been written to convey a knowledge of the human system, and of the nature and use of medicine, yet there is still great ignorance prevailing on these subjects. This ignorance fosters every kind of imposition. It is the prolific mother of quackery. From it has mainly sprung that abominable practice of indiscriminate dosing and drugging which has ruined the health of multitudes, and filled the pockets of charlatans. This pernicious custom is far more prevalent than is generally imagined.

We recommend this work to families generally; and especially to those who cannot command the services of a physician. There are many of this class, and they may be essentially benefited by such a book. This work is very valuable, as it strongly insists upon the importance of *cleanliness*, than which no subject is more important to the health, comfort, and vigor of both mind and body. In fine, we have perused this book with both pleasure and profit, and are well assured that its authors have done a good deed in giving it to the public.

From the Providence Journal.

New England Popular Medicine. By GEORGE CAPRON, M. D., and DAVID B. SLACK, M. D.

A popular work on medicine, adapted to the unprofessional reader, and yet, with scientific care and ability, has long been wanted. Buchan's work, published three quarters of a century ago, has been, in a great degree, superseded by recent discoveries in medicine, and there is no book of the kind, published under a responsible name, to take its place. The book before us has been prepared with the greatest care and research by competent and thoroughly educated physicians. We do not hesitate to recommend the publication as one upon the accuracy and scientific information of which every reliance may be placed.

From the Providence Republican Herald.

New England Popular Medicine. We have given a hasty glance through the pages of this work, and believe it to be a book of such intrinsic merit that it ought to find its way into every family. The subjects on which it treats, which are arranged in an "alphabetical or dictionary form," are divested, as far as is practicable, of technical terms, and are stated and treated in language which any one may comprehend. The object of the authors has been, "to give a complete and comprehensive description of diseases, as well as full and definite directions for their treatment;" and they have accomplished that work so admirably, that we may safely predict, when the work shall have become well known, it will meet with an extensive and ready sale, and, superseding the antiquated work of Buchan, will be the domestic medicinal guide of every head of a family.

From the Providence Gazette.

New England Popular Medicine. The POPULAR MEDICINE, we are inclined to believe, is a very valuable work. We find in it a very comprehensive description of diseases flesh is heir to, and full and definite directions for their treatment. The properties and effects of all the most important articles of medicine are also particularly and faithfully described, and in such plain, simple language as to make their description intelligible to the common reader. We cannot doubt that such a work—filling a vacuum in the world of books—will be extensively read, and as extensively useful.

From the Providence Transcript.

New England Popular Medicine. By GEORGE CAPRON, M. D., and DAVID B. SLACK, M. D.

This work does credit to the authors' industry, practical skill and judgment, and exhibits evidence of a well grounded knowledge of medical science, with accurate views of diseases and their treatment, founded on observation. There is, throughout the book, a careful adaptation to the capacities and attainments of every reader. A valuable service has thus been rendered to the public, which they will not be slow to appreciate and acknowledge. Every family would find this book a valuable acquisition in time of need.



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